



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

DOCKETED  
USNRC

July 29, 1998

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OFFICE OF SECRETARY  
RULEMAKING AND  
ADJUDICATIONS STAFF

MEMORANDUM TO: B. Paul Cotter, Jr.  
Chief Administrative Judge  
Atomic Safety and Licensing Board Panel

FROM: *John C. Hoyle*  
John C. Hoyle, Secretary

SUBJECT: REQUESTS FOR HEARING OF ENVIROCARE OF UTAH  
AND THE STATE OF UTAH

Attached is a request for hearing submitted on July 22, 1998, by Envirocare of Utah, Inc. Also attached is a request for hearing submitted by the State of Utah on July 23, 1998. The two requests address a license amendment issued by the NRC staff to International Uranium (USA) Corporation (IUSA) (See Exhibit 1 to the request of the State of Utah). The amendment allows IUSA (Docket No. 40-8681) to receive uranium bearing material from the Ashland 2 Formerly Utilized Sites Remedial Action Program site near Tonawanda, New York.

The requests for hearing are being referred to you for appropriate action in accordance with 10 C.F.R. Sec. 2.1261.

Attachments: As stated

cc: Commission Legal Assistants  
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OPA  
EDO  
NMSS  
David Jordan, Esquire  
Envirocare of Utah, Inc.  
Fred G. Nelson, Esquire  
State of Utah  
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International Uranium (USA) Corp.

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Attorneys for Envirocare of Utah, Inc.

BEFORE THE UNITED STATES NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF	)	
INTERNATIONAL URANIUM (USA)	)	DOCKET NO.
CORPORATION'S AMENDMENT TO	)	
NRC SOURCE MATERIAL LICENSE	)	REQUEST FOR HEARING OF
SUA-1358	)	ENVIROCARE OF UTAH, INC.
_____	)	

I. INTRODUCTION

1.1 This is a request by Envirocare of Utah, Inc. ("Envirocare") to the United States Nuclear Regulatory Commission ("NRC") pursuant to 10 C.F.R. § 2.1205, for a hearing on the amendment to International Uranium (USA) Corporation's ("IUSA") Source Material License SUA-1358 allowing the receipt and "processing" of uranium-bearing material from the Ashland 2 Formerly Utilized Sites Remedial Action Program ("FUSRAP") site near Tonawanda, New York and the Categorical Exclusion under 10 C.F.R. 51.22(c)(11) issued by the NRC for that license amendment.

REQUEST FOR HEARING - 1

SLC1-36524.1 24875-0002

U.S. NUCLEAR REGULATORY COMMISSION  
RULEMAKING & ADJUDICATIONS STAFF  
OFFICE OF THE SECRETARY  
OF THE COMMISSION

Document Statistics

Postmark Date 7/22/98  
Copies Requested 4  
Add'l Copies Requested 8  
Special Distribution Sender STDS  
JUSA, UTAH

1.2 The amendment and Categorical Exclusion are challenged, because (1) the NRC did not follow its internal guidance ("Final Revised Guidance on Disposal of Non-Atomic Energy Act of 1954 Section 11e.(2) Byproduct Material in Tailing Impoundments," September, 1995) in reaching its decision; (2) the amendment is subject to the standards set forth in 10 C.F.R. part 40 and IUSA's license amendment application does not demonstrate that the requirements in 10 C.F.R. part 40 will have been, or will be, met; and (3) the action is inconsistent with the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4232, the NRC's regulations for the implementation of NEPA, 10 C.F.R. part 51, and with the NRC's prior application of NEPA to similarly situated licensees.

## II. PETITIONER

2.1 This is a request by Envirocare to the NRC.

2.2 Envirocare is a Utah corporation that is in the business of operating a facility in Clive, Utah, for the disposal of radioactive waste.

2.3 Envirocare is licensed by the NRC to receive and dispose of uranium and thorium byproduct material (as defined in section 11e.(2) of the Atomic Energy Act ("AEA"), as amended).

## III. ACTION REQUESTED

3.1 Envirocare requests that the NRC hold a hearing, pursuant to 10 C.F.R. part 2 subpart L, on IUSA's request for an amendment to Source Material License SUA-1358 to

allow IUSA to receive, process and dispose of 11e.(2) byproduct material at its White Mesa site.

3.2 Envirocare requests that the NRC require IUSA to demonstrate that it complies with the requirement that a determination be made that the material is being processed primarily for its source material content.

3.3 Envirocare requests that the NRC require IUSA to demonstrate that the proposed amendment meets the standards set forth in 10 C.F.R. part 40 (including appendix A), and that the NRC deny the amendment if IUSA cannot make such a showing.

3.4 Envirocare also requests that the NRC withdraw its Categorical Exclusion and require the preparation of an Environmental Impact Statement ("EIS") for IUSA's license.

3.5 Envirocare also requests that the NRC fully evaluate any releases that have occurred from any tailings impoundment.

#### IV. STATEMENT OF FACTS

4.1 Envirocare was the first private facility in the United States to be licensed by the NRC to accept 11e.(2) material<sup>1</sup> from outside generators for disposal. In licensing

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<sup>1</sup> The 11e.(2) material Envirocare is authorized to accept for disposal includes byproduct materials, which consist of tailings or wastes produced by the extraction or concentration of uranium or thorium.

Envirocare, the NRC set forth the requirements that an 11e.(2) disposal facility must comply with for licensure. Specifically, the NRC requires:

Compliance with the regulations set forth in 10 C.F.R. part 40, including appendix A. These include stringent site and design criteria, groundwater protection standards, radon barrier requirements, detection monitoring requirements, and inspection requirements.

Preparation by NRC staff of an Environmental Impact Statement ("EIS"), pursuant to 10 C.F.R. part 51, based upon an Environmental Report prepared by the applicant (relating to environmental protection from the harmful effects of land disposal of radioactive waste).

Compliance with administrative and record keeping requirements delineated in 10 C.F.R. §§ 61.80 and 61.82.

Compliance with the waste manifest requirements in 10 C.F.R. § 20.311.

Compliance with the worker safety and other requirements delineated in 10 C.F.R. parts 19, 20, and 21.

See 59 Fed. Reg. 2959 (Jan. 25, 1991); 58 Fed. Reg. 62690 (Nov. 29, 1993); Byproduct Material License No. SMC-1559. Copies of these documents are attached as Appendix A.

4.2 When Envirocare applied for a license to accept 11e.(2) material for disposal, the NRC also required Envirocare to submit a detailed Environmental Report, which formed the basis of the NRC's decision to require that an EIS be prepared pursuant to the NRC's NEPA regulations. See 10 C.F.R. part 51. Envirocare spent an estimated \$1.675 million for the costs it incurred in preparing the EIS at the direction of the NRC.

4.3 IUSA has operated a uranium mill at its White Mesa site, at which it has processed materials from its own mine, and from outside generators. IUSA has disposed of the radioactive wastes that were produced as byproducts of its milling operations on site.

4.4 The NRC has issued upgraded Source Material License SUA-1358 for IUSA's mill, pursuant to 10 C.F.R. part 40. This license authorizes IUSA to receive and transfer uranium, possess byproduct material generated by mill operations, and accept limited amounts of byproduct material from in situ leach uranium mining facilities. Publicly available information indicates that IUSA continued to receive materials from outside generators for processing, and that it continued to dispose of the radioactive waste byproducts on site. A review of publicly-available documents also indicates that this license was approved without the preparation of an EIS. IUSA has subsequently applied for multiple amendments to its license. The NRC did not conduct full environmental review under NEPA for any of these license amendments.

4.5 On May 8, 1998, IUSA submitted its request for an amendment to Source Material License SUA-1358 in order to allow it to accept for disposal up to 25,000 tons of 11e.(2) material from the Ashland 2 FUSRAP site near Tonawanda, New York, in addition to the material it already accepted from in situ leaching facilities.

4.6 In granting IUSA's license amendment, the NRC did not make its finding based upon the economic justification submitted by IUSA, rather the NRC applied the

co-disposal test. Envirocare submits that the economic justification test is the proper method to use to determine if the material is being processed primarily for its source material content.

4.7 Envirocare submits that this material cannot meet the economic justification test.

4.8 The NRC has not adequately examined the actual data associated with this material. The Remedial Investigation (RI) Report for the Tonawanda Site (DOE/OR/21949-300) report provides detailed sampling schemes and analyses for the different areas at the Tonawanda site. Table 4-42 of the RI provides a "summary of radionuclide concentration in contaminated soil at Ashland 2." This table also provided that an average concentration of U-238 over all of the points in this table was 25.2 pCi/g, which equals to approximately 0.008 wt. %. However, the ROD mentions that only soils which exceed the site-specific derived guideline of 40 pCi/G Th-230 shall be excavated. Using this guidance, and Table 4-42 of the RI as a basis, the average concentration of U-238 is 56.0 pCi/g or 0.017 wt. %. The best estimate of material destined for IUSA's White Mesa facility is 50 pCi/g Th-230. This material has an average U-238 weight percent of 0.017% which cannot be justified as an "ore." Thus, the uranium content within the material is not economical for reprocessing.

4.9 Envirocare submits that IUSA cannot meet the co-disposal test, since, as the NRC has asserted, this material is not regulated under the AEA. Further, the NRC did

not properly review the elements required to meet the co-disposal test prior to making its determination -- the NRC has neglected to follow its guidance in evaluating whether the disposition of this material would be approved by both of the affected low-level radioactive waste compacts (place of generation and disposal) and whether the Department of Energy or the state would take title to the tailings after closure.

4.10 Envirocare further submits that the co-disposal set forth in the NRC's guidance is not consistent with law and regulations.

4.11 NRC's NEPA regulations require that an applicant for an amendment to a license issued pursuant to 10 C.F.R. part 40 must submit an Environmental Report with that application. 10 C.F.R. § 51.60. IUSA did not submit an Environmental Report with its application for an amendment to its license to allow it to conduct additional land disposal of 11e.(2) material.

4.12 NRC's NEPA regulations also require that an EIS be prepared for licensing actions that are major actions that significantly affect the quality of human environment. 10 C.F.R. § 51.20. Additionally, those regulations state that renewal of a license authorizing receipt and disposal of radioactive waste from other persons or amendment of such a license relating to closure of a land disposal site are the types of action that require an EIS. 10 C.F.R. §§ 51.20(b)(11) and (12). The detailed requirements set forth in 10 C.F.R. part 40 appendix A indicate that selection of a disposal site for 11e.(2) byproduct material is a major federal action that has a significant impact on the human environment.

Further, IUSA's request for a license amendment effectively asks for renewal of authorization to dispose of radioactive wastes from other persons.

4.13 In spite of these regulatory requirements, the NRC issued a Categorical Exclusion for IUSA's license amendment, indicating that it would not require any environmental review to be prepared.

4.14 In deciding that it would not require any environmental review for IUSA's proposed license amendment, the NRC apparently relied on documents prepared by the United States Army Corps of Engineers ("USACE") which evaluated the environmental impacts associated with the excavation of this material and associated cleanup activities at the Tonawanda, New York location of the materials.

4.15 The documents the NRC relied on in issuing a Categorical Exclusion are wholly inadequate. Those documents do not in any way mention, let alone evaluate, IUSA's White Mesa site or any of the transportation impacts related to the shipment of these materials from New York to Utah. The information relied on by the NRC does not discuss any environmental impacts on the White Mesa site.

4.16 At no time did the NRC require IUSA to submit an Environmental Report addressing the environmental impacts that would occur from the requested license amendment (as required by NRC's NEPA regulations), nor did it require IUSA to update any prior Environmental Reports submitted for the facility. Absolutely no environmental evaluation has been performed.

4.17 Accordingly, the Categorical Exclusion fails to comply with the NRC's own regulations in all respects. For example, it fails to discuss (1) alternatives, as required by section 102(2) of NEPA, and (2) the environmental impacts of those alternatives. 10 C.F.R. § 51.30(a)(1)(ii)(iii).

4.18 Based on publicly available information, it is impossible to ascertain whether and to what degree the proposed activity will adversely impact the environment and public health. Publicly available documents indicate that the site has existing environmental problems that will likely be exacerbated by the importation of large volumes of additional radioactive wastes for disposal. For example, (are there any contamination problems at the White Mesa site???)

4.19 Additionally, the NRC has failed to address the impacts that the shipment of 25,000 tons of radioactive wastes will have on the environment. These impacts can include the impact on the highways and public roads from the increased traffic associated with such shipment, and the increased risk of radiological accidents that results from increased numbers of trucks and railcars carrying radioactive wastes to IUSA's facility.

#### V. ENVIROCARE'S SHOWING UNDER 10 C.F.R. § 2.1205(d)

5.1 Envirocare is a "person" whose interest may be affected by the proposed amendment to IUSA's license, and is therefore entitled to file this request for a hearing pursuant to 10 C.F.R.

5.2 Envirocare makes the following showing in support of its right to request a hearing on IUSA's amendment, pursuant to 10 C.F.R. § 2.1205(d) and (g):

5.3 Interest of requestor in proceeding:

5.3.1 Envirocare is in the business of operating a facility in Clive, Utah, for the disposal of radioactive waste, and is licensed by the NRC to receive and dispose of 11e.(2) byproduct material. Envirocare's license complies with strict standards, as set forth in 56 FR 2959.

5.3.2 Envirocare's licensing as a disposal facility provided the public an opportunity to comment on NRC's proposed licensing of Envirocare as a radioactive waste disposal facility. Envirocare was required as a radioactive waste disposal facility in Utah to obtain a ground water discharge permit from the Utah Department of Environmental Quality.

5.3.3 As such, Envirocare has an economic interest in ensuring that all licensees that propose to accept 11e.(2) byproduct material comply with applicable NRC standards. Additionally, Envirocare has an interest, as a member of an environmentally sensitive industry, in ensuring that the environmental laws designed to protect human health and the environment from the hazards of radioactive waste disposal are uniformly applied and enforced by the NRC.

5.3.4 Envirocare sought to bid on the disposal of the radioactive material being removed from the Ashland 2 Tonawanda, New York site and have a contract

awarded to it. Envirocare was effectively excluded from competing for the disposal of that material when the NRC decided, contrary to its own guidance and regulations, that the material could be "reprocessed" at IUSA's mill rather than at a facility specifically designated and licensed for the disposal of such radioactive material. If the NRC does not withdraw IUSA's license amendment, Envirocare will lose the opportunity to compete altogether for the right to perform the work called for relative to the disposal of the Ashland 2 materials -- and the profits to be derived therefrom. The lost opportunity to compete for a public contract and derive profits therefrom constitutes "irreparable injury" to Envirocare.

5.4 How interest may be affected by results of proceeding:

5.4.1 IF IUSA's amendment does not comply with the standards in 10 C.F.R. part 40, which Envirocare was required to comply with, Envirocare would be adversely affected in the following ways:

5.4.2 First, compliance with the strict standards applied to Envirocare constitutes a substantial financial burden to Envirocare. For example, 10 C.F.R. part 40 appendix A sets forth stringent site and design criteria, groundwater protection standards, radon barrier requirements, detection monitoring requirements, and inspection requirements. Envirocare is required to construct and operate its byproduct material disposal system in accordance with these standards. If IUSA's White Mesa site is not required to meet the same strict standards, Envirocare will be placed at a severe

competitive disadvantage, because IUSA's lower costs will allow it to attract customers away from Envirocare.

5.4.3 Second, the criteria set forth in 56 FR 2959 are designed to protect the public against the health and safety dangers posed by byproduct material. If the NRC does not hold IUSA to the same strict standards, there is a risk that IUSA's operation of the White Mesa facility might result in harm to the public health and safety. Harm to the public resulting from IUSA's operation of the White Mesa facility would create public outcry for additional regulation of all byproduct material disposal facilities, raising costs for all operators in the industry (even those, such as Envirocare, who have operated their facilities in an environmentally safe manner).

5.4.4 Third, the NRC also required the preparation of an EIS for Envirocare's licensing as an 11e.(2) disposal facility, at Envirocare's expense. Preparation of an EIS ensured that (1) any significant adverse effect on the human environment from its facility would be identified and analyzed, (2) alternatives to the license would be identified and analyzed, (3) the public would have the opportunity to comment on the potential adverse environmental effects, and (4) any adverse effects could then be mitigated. Failure to require IUSA to prepare an EIS means that the potentially negative environmental impacts of, and alternatives to, IUSA's proposed license amendment will not be identified and analyzed; nor will there be public comment and participation as mandated by NEPA. This failure potentially threatens public health

and the environment and will undermine public confidence in 11e.(2) radioactive waste disposal facilities.

5.4.5 Fourth, failure to impose comparable requirements on IUSA creates an unfair competitive advantage for IUSA and a concomitant disadvantage for Envirocare. If IUSA is not required to prepare an EIS for a license to accept 11e.(2) material, it confers an unfair economic (and hence competitive) advantage on IUSA.

5.4.6 Envirocare satisfies the judicial standards for standing. The adverse effects described in the preceding paragraphs satisfy the injury in fact requirement.

5.4.7 Moreover, Envirocare's financial interests as an operator in the byproduct material disposal business are within the zone of interests protected by the AEA. 42 U.S.C. §§ 2011-2284. The AEA and the regulations promulgated thereunder provide that the NRC in its management of byproduct material shall give due consideration to the economic costs associated with possession and transfer of such material. See 42 U.S.C. § 2114(a)(1), 10 C.F.R. part 40 appendix A.

5.4.8 Envirocare's environmental and economic interests are also within the zone of interests protected by both NEPA and the AEA. See 42 U.S.C. § 4331-4332; and 42 U.S.C. § 2114. Both these statutes are designed to protect the public health and the environment, as well as foster the environmentally responsible growth of the nuclear energy industry. Envirocare, as a member of that industry, is in a unique position to help ensure that the NRC lives up to those statutory objectives.

5.4.9 An order by the NRC requiring IUSA's amendment to comply with the same AEA and NEPA requirements that Envirocare was required to comply with would prevent the above-described injury to Envirocare's interests.

5.5 Requestor's areas of concern about the licensing activity that is the subject matter of the proceeding:

5.5.1 IUSA's proposed amendment is subject to the requirements of 10 C.F.R. part 40. See 10 C.F.R. §§ 40.2, 40.3.

5.5.2 10 C.F.R. part 40 appendix A sets forth stringent site and design criteria, groundwater protection standards, radon barrier requirements, detection monitoring requirements, and inspection requirements.

5.5.3 Applications for license amendments must be filed in accordance with 10 C.F.R. § 40.31. See 10 C.F.R. § 40.44.

5.5.4 10 C.F.R. § 40.31 requires the applicant to clearly demonstrate by means of written specifications in the application, how the requirements of 10 C.F.R. part 40 appendix A have been addressed. Failure to make such a showing is grounds for the NRC to refuse to accept an application.

5.5.5 IUSA's summary application for its proposed amendment fails to set forth written specifications showing that the requirements of 10 C.F.R. part 40 appendix A have been met. See IUSA's request for amendment dated May 8, 1998.

5.5.6 IUSA proposes to process and dispose of newly received byproduct material. As set forth hereinabove, IUSA's license amendment does not meet the NRC's guidance because it is not processing the material for its source material content; IUSA does not meet either the economic justification or the co-disposal test within the NRC's guidance.

5.5.7 The co-disposal test set forth in the NRC's guidance is not consistent with the existing law and regulations.

5.5.8 NEPA is designed to ensure that federal agencies fully develop information that allows them to consider the environmental impact of their actions, and an EIS is evidence that an agency has considered environmental concerns. NEPA also ensures that the public is made aware of potential adverse environmental effects and has the opportunity to comment on them.

5.5.9 It appears from publicly available information that the NRC has failed to consider the environmental impacts of IUSA's license amendment to the extent required by NEPA. Publicly available information indicates that the NRC has yet to analyze IUSA's facility under NEPA and inform the public of any adverse environmental effects of its operations.

5.5.10 Envirocare has concerns under both NEPA and the AEA to ensure that public confidence in low-level radioactive waste disposal sites is not undermined by

the NRC's failure to ensure that adequate information about environmental impacts of a proposed disposal scheme is identified and analyzed.

5.5.11 Envirocare has an economic concern that the NRC failed to adequately address the environmental impact of IUSA's amendment. Envirocare spent almost \$1.675 million to reimburse the NRC for costs the NRC incurred in preparing an EIS for Envirocare's disposal facility. If IUSA's license amendment is not withdrawn, IUSA will save the substantial costs associated with preparing an EIS, costs that it will not have to pass on in fees charged to 11e.(2) waste generators. IUSA will be able to charge lower fees and will gain a competitive advantage over Envirocare.

5.5.12 Envirocare's economic interests are tied to its environmental interest in the safe operation of IUSA's facility. If the environmental impacts of IUSA's license amendment are not adequately assessed or identified for public comment, public confidence in the safe operation of low-level radioactive waste facilities will suffer. The nuclear energy industry is a controversial and politically sensitive one. If public confidence in the safe disposal of radioactive waste is lost, the future of these facilities will be endangered.

#### 5.6 Circumstances establishing that request for hearing is timely

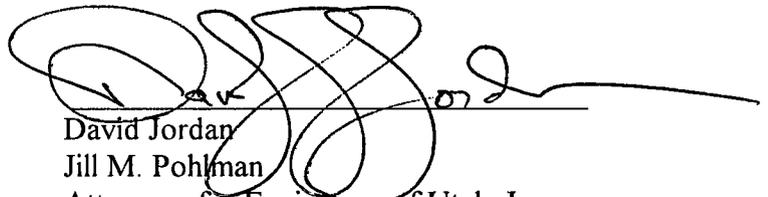
Envirocare received actual notice of the NRC's action granting IUSA's proposed amendment on June 23, 1998. This request is timely pursuant to 10 C.F.R. § 2.1205(d)(1).

VI. CONCLUSION

For the foregoing reasons, Envirocare respectfully requests that the NRC grant a hearing on IUSA's amendment pursuant to 10 C.F.R. part 2 subpart L and take the other actions requested in this Petition.

DATED this 22 day of July 1998.

STOEL RIVES LLP



David Jordan  
Jill M. Pohlman  
Attorneys for Envirocare of Utah, Inc.

Service of Envirocare of Utah, Inc. may be made on:

David J. Jordan  
Jill M. Pohlman  
STOEL RIVES LLP  
One Utah Center, Eleventh Floor  
201 South Main Street  
Salt Lake City, Utah 84111-4904

**CERTIFICATE OF SERVICE**



I hereby certify that I caused the original and two copies of the **Request for Hearing of Envirocare of Utah, Inc.** to be mailed, postage prepaid, this 22 day of July, 1998 to the following:

Secretary, U.S. Nuclear Regulatory Commission  
Attn: Rulemakings and Adjudications Staff  
Washington, DC 20555-0001

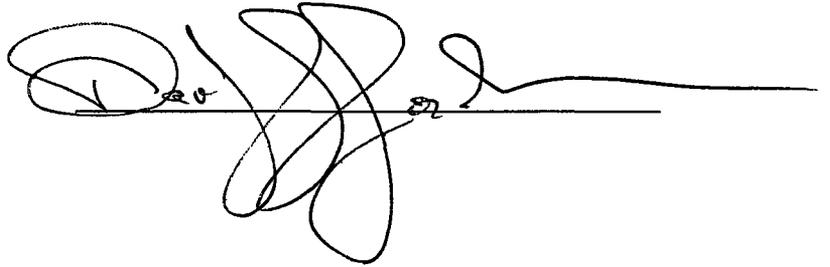
and a true and correct copy of the foregoing **Request for Hearing of Envirocare of Utah, Inc.** to be mailed, postage prepaid, this 22 day of July, 1998 to the following:

Rulemakings and Adjudications Staff of the  
Offices of the Secretary  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

International Uranium (USA) Corporation  
Independence Plaza, Suite 950  
1050 Seventeenth Street  
Denver, CO 80265

NRC Staff  
Executive Director of Operations  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

Executive Director of Operations  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

A handwritten signature in black ink, consisting of several large, overlapping loops and a long horizontal stroke extending to the right. The signature is written over a thin horizontal line.

REQUEST FOR HEARING - 19

SLC1-36524.1 24875-0002

56 FR 2959 printed in FULL format.

NUCLEAR REGULATORY COMMISSION

[Docket No. 04008989]

56 FR 2959

January 25, 1991

Envirocare of Utah, Inc.; Receipt of Application for Byproduct Material Waste Disposal License

FOR FURTHER INFORMATION CONTACT: Terry L. Johnson, Uranium Recovery Branch, Division of Low-Level Waste Management and Decommissioning, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-3440.

TEXT: Notice of Receipt of Application for Byproduct Material Waste Disposal License

Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) has received, by letter dated November 14, 1989, an application and safety analysis report from Envirocare of Utah, Inc., for a license to accept and dispose of uranium and thorium byproduct material (as defined in section 11e.(2) of the Atomic Energy Act, as amended) received from other persons, at a site near Clive, Utah.

The applicant proposes to dispose of high-volume, low-activity section 11e.(2) byproduct material received in bulk by rail and truck.

The material will be placed in earthen disposal cells in lifts and covered with earth and rock. The applicant proposes to conduct operations on a site where the applicant currently disposes of Naturally Occurring Radioactive Material (NORM) under license from the Utah Department of Health, Bureau of Radiation Control.

Th State of Utah has recently been granted an amended agreement, pursuant to section 274b. of the Atomic Energy Act, as amended, to expand its regulatory authority to include the disposal of low-level radioactive waste. The authority does not, however, include authority to regulate the disposal of section 11e.(2) byproduct material. Regulatory authority for the disposal of section 11e.(2) byproduct material in the State of Utah remains with the NRC.

The disposal of waste considered in this notice would occur in disposal units separate from those used to dispose of other categories of waste.  
Notice of Availability of Applicant's Application

The applicant's application, which describes the natural and proposed design features of the facility, as well as facility operations, is being made available for public inspection at the Commission's Public Document room at 2120 L Street, NW. (Lower Level), Washington, DC 20555.

Notice of the Regulatory requirements That NRC Will Apply in the Review of the Application and in Reaching a Licensing Decision

By this notice, the Commission is establishing the applicability of its regulations to this specific application for the commercial disposal of section 11e.(2) byproduct material.

1. The Commission has determined that 10 CFR part 40, including appendix A, applies to the review of this application to dispose of section 11e.(2) byproduct material. The applicant may request an exemption from any requirements in 10 CFR part 40 that it believes should not apply.

2. The NRC staff will prepare an environmental impact statement (EIS) pursuant to the requirements of 10 CFR part 51. The EIS will be based on the staff evaluation of an environmental report to be prepared by the applicant.

3. Certain administrative and recordkeeping requirements delineated in 10 CFR part 61, subpart G, must be included in the license. These requirements are given in 10 CFR 61.80 and 61.82.

4. The waste manifest requirements contained in 10 CFR 20.311 will be made applicable by a license condition. The licensee will be allowed to accept waste only if it is accompanied by a manifest prepared according to 10 CFR 20.311. Based on the application, the NRC staff may consider, as part of the licensing process, exemptions for certain specific packaging, classification, and labeling requirements contained in 10 CFR 20.311, for land burial, that may not be germane to section 11e.(2) byproduct material waste shipped to the facility. The staff will also require that more information be obtained from the generator on the chemical constituents than the "principle chemical form" as specified in 10 CFR 20.311(b) in order to address the data and groundwater protection requirements of appendix A to 10 CFR part 40.

5. The general requirements of other Commission regulations: 10 CFR part 19 -- "Notices, Instructions, and Reports to Workers: Inspections and Investigations"; 10 CFR Part 20 -- "Standards for Protection Against Radiation"; and 10 CFR Part 21 -- "Reporting of Defects and Noncompliance," will apply according to their terms.

Notice of Opportunity for Hearing

The applicant and any person whose interest may be affected by the issuance of this license may file a request for a hearing. A request for hearing must be filed with the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, within 30 days of the publication of this notice in the Federal Register; be served on the NRC staff (Executive Director for Operations, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852); be served on the applicant (Envirocare of Utah, Inc., 175 South West Temple, suite 500, Salt Lake City, Utah 84101); and must comply with the requirements set forth in the Commission's regulations, 10 CFR 2.105 and 2.714. The request for hearing must set forth with particularity the interest of the petitioner in the proceeding and how that interest may be affected by the results of the proceeding,

including the reasons why the request should be granted, with particular reference to the following factors:

1. The nature of the petitioner's right, under the Act, to be made a party to the proceeding;
2. The nature and extent of the petitioner's property, financial or other interest in the proceeding; and
3. The possible effect, on the petitioner's interest, of any order which may be entered in the proceeding.

The request must also set forth the specific aspect or aspects of the subject matter of the proceeding as to which petitioner wishes a hearing.

The applicant, any person admitted as a party, or an entity participating under 10 CFR 2.715(e), may move the Commission to reconsider any portion of this notice relating to the applicability of 10 CFR 20.311 and 10 CFR 61.80 and 61.82. The petition must be filed within 60 days after the person or entity is admitted to the proceeding and contain all technical or other arguments to support the petition. The motion will be processed under 10 CFR 2.730.

Dated at Rockville, Maryland, this 18th day of January 1991.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.  
[FR Doc. 91-1756 Filed 1-24-91; 8:45 am]

BILLING CODE 7590-01-M

58 FR 62690 printed in FULL format.

FEDERAL REGISTER  
VOL. 58, No. 227

Notices

NUCLEAR REGULATORY COMMISSION (NRC)

[Docket No. 40-8989]

Envirocare of Utah, Inc.; Issuance of Facility License

58 FR 62690

DATE: Monday, November 29, 1993

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To view the next page, type .np\* TRANSMIT.  
To view a specific page, transmit p\* and the page number, e.g. p\*1  
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Notice is hereby given that the U.S. Nuclear Regulatory Commission (the Commission or NRC), has issued Byproduct Material License N. SMC-1559 to Envirocare of Utah, Inc. which authorizes the receipt, storage, and disposal of 11e.(2) byproduct material (as defined in section 11e.(2) of the Atomic Energy Act of 1954, as amended) at a site near Clive, Utah.

The application for the license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's Regulations in 10 CFR chapter I which are set forth in the license. Prior public notice of the overall action involving the proposed issuance of license was published in the Federal Register on January 25, 1991 (56 FR 2659).

The Commission has determined that the issuance of this license will not result in any environmental impacts other than those evaluated in the Final Environmental Statement since the activity authorized by this license is encompassed by the overall evaluation described in the Final Environmental Statement.

For further details with respect to this action, see (1) byproduct Material License SCM-1559; (2) the Commission's Final Safety Evaluation Report, dated June 18, 1993, and Supplement 1; (3) the License Application, and amendments thereto; (4) the Environmental Report, and amendments thereto; and (5) the Final Environmental Statement dated August 1993.

These items are available for inspection at the Commission's Public Document Room located in the Gelman Building, Lower Level, 2120 L Street, NW., Washington, DC.

Dated at Rockville, Maryland this 19th day of November 1993. [\*62691]

For the Nuclear Regulatory Commission.

Daniel M. Gillen,

Acting Chief, Uranium Recovery Branch, Division of Low-Level Waste Management  
and Decommissioning, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 93-29128 Filed 11-26-93; 8:45 am]

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MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		3. License Number	
1.	Envirocare of Utah, Inc.	SMC-1559, Amendment No. 13	
2.	46 W. Broadway Suite 240 Salt Lake City, Utah 84101	4. Expiration Date	November 30, 2003
		5. Docket or Reference No.	40-8989

Byproduct, Source, and/or Special Nuclear Material

7. Chemical and/or Physical Form

8. Maximum Amount that Licensee May Possess at Any One Time Under This License

11e.(2) byproduct material

Packaged or Bulk Radioactive Waste

5.5 Million Cubic Yards [Applicable Amendment: 5]

This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I, Parts 19; 20; 21; 40, including Appendix A; 51; 61.80; and 61.82 and is subject to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

SECTION 9.0: Administrative Conditions

- 9.1 All notices to the Nuclear Regulatory Commission required under this license shall be addressed to the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards.....
- 9.2 Authorized place for use shall be the licensee's facility located in Section 32 of Township 1 S, Range 11 W, Tooele County, Utah, near Clive.
- 9.3 Authorized use is for the receipt, storage, and disposal of 11e.(2) byproduct material in accordance with statements, descriptions, and representations contained in the licensee's application, including appendices, submitted by cover letter dated 12/23/91; as amended by page changes submitted on 07/02/92, 08/10/92, 04/05/93, 04/07/93, 04/10/93, 05/03/93, 05/06/93, 05/11/93, 05/21/93, 07/01/93, 07/25/93, 08/03/93, 08/11/93, 08/19/93, 08/25/93, 01/14/94 (deletes only Operating Procedure TRAIN-1; other documents submitted on this date remain in force), 01/21/94, 03/01/94, 03/08/94, 04/19/94, 06/10/94, 06/29/94, 06/30/94, 07/27/94, 08/03/94, 09/1/94, 01/19/95, 03/24/95, 04/11/95 (deletes only Appendix JJ, Quality Assurance Manual; other documents submitted on this date remain in force), 05/24/95, 06/14/95, 08/25/95, 09/18/95, 04/01/98, 04/08/98, and 04/17/98.

Notwithstanding the above, the following conditions shall override any conflicting statements contained in the licensee's application and supplements.

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[Applicable Amendments: 1, 2, 3, 4, 5, 6, 7, 8, 9,10, 11 and 12]

9.4 In accordance with NRC approved performance based license provisions:

- a) The licensee may, without prior NRC approval, and subject to the conditions specified in Part b of this condition:
  - (1) Make changes in the facility or process, as presented in the application.
  - (2) Make changes in the procedures presented in the application.
  - (3) Conduct tests or experiments not presented in the application.
  
- b) The licensee shall file an application for an amendment to the license, unless the following conditions are satisfied.
  - (1) The change, test, or experiment does not conflict with any requirement specifically stated in this license (excluding material referenced in License Condition 9.3), or impair the licensee's ability to meet all applicable NRC regulations.
  - (2) There is no degradation in the essential safety or environmental commitments in the license application, or provided by the approved reclamation plan.
  - (3) The change, test, or experiment are consistent with the conclusions of actions analyzed and selected in the site Environmental Impact Statement (NUREG-1476) dated August 1993, and the Safety Evaluation Report (NUREG-1486) dated January 1994.
  
- c) The licensee's determinations concerning Part b of this condition, shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management and shall be responsible for managerial and financial approval changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and, one member shall be the corporate radiation safety officer (CRSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP as appropriate, to address technical aspects such as health physics, groundwater hydrology, surface-water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.
  
- d) The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations, made by the SERP, that provide the basis for determining changes are in compliance with the requirements referred to in Part b of this

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condition. The licensee shall furnish, in an annual report to NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC changed pages to the Operations Plan and Reclamation Plan of the approved license application to reflect changes made under this condition.

[Applicable Amendment: 7]

- 9.5 In order to assure that no unapproved disturbance of cultural resources occurs, the licensee shall cease any work resulting in the discovery of previously unknown cultural artifacts and report the discovery, in writing, to the NRC and the Utah State Historic Preservation Office (SHPO). The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance shall occur until the licensee has received written authorization from the NRC to proceed.
- 9.6 Prior to the initial receipt and storage of any 11e.(2) byproduct material at the site, the licensee shall:
- a) establish and implement standard operating procedures (SOPs) for all operational activities involving the handling, storing or disposing of radioactive materials. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed. In addition, SOPs shall be established and implemented for non-operational activities to include environmental monitoring, bioassay analysis, and instrument calibration. An up-to-date copy of each written SOP, as controlled under the quality assurance (QA) procedures, shall be kept in each area where it is used.
  - b) Deleted by Amendment 1
  - c) Deleted by Amendment 1
  - d) Deleted by Amendment 1
  - e) modify the Quality Control/Quality Assurance Plan to provide quality controls for waste sampling and characterization. The plan must also be modified to provide controls for the quality of the protective equipment (e.g., anticontamination clothing and equipment that meets the ANSI Z-88.2 guidance (ANSI, 1989)) and respiratory protection equipment;
  - f) design and implement an effective air sampling program in the workplace based on Revision 1 to NRC Regulatory Guide 8.25 (1992) entitled "Air Sampling in the Workplace," or an equivalent program.

[Applicable Amendment: 1]

- 9.7 Prior to the initial disposal of 11e.(2) byproduct material, the licensee shall:
- a) Deleted by Amendment 1

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- b) Deleted by Amendment 1
- c) Deleted by Amendment 1
- d) Deleted by Amendment 2

[Applicable Amendments: 1, 2]

- 9.8 The licensee shall have all written SOPs reviewed and approved by the CRSO, or designate, qualified by way of specialized radiation protection training equivalent to that required for the CRSO as defined in License Condition 9.10, before being implemented and whenever a change in a procedure is proposed. All existing facility SOPs related to operational and non-operational activities shall be reviewed and documented by the CRSO on an annual basis.

[Applicable Amendment: 7]

- 9.9 Any change to the licensee's corporate organizational structure, as presented in the license application, affecting the assignment or reporting responsibility of the radiation staff shall conform to Regulatory Guide 8.31, "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Mills Will Be As Low As Is Reasonably Achievable."

[Applicable Amendment: 7]

- 9.10 The licensee shall have a CRSO responsible for the site who shall report directly to the Vice-President of Compliance/Licensing on matters dealing with radiological safety aspects of the licensed facility. In addition to the responsibilities and qualifications specified in the licensee's application, the CRSO, or his designate shall be qualified as specified in Sections 1.2 and 2.4 of Regulatory Guide 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills will be As Low As Reasonably Achievable," dated May 1983. In addition, the CRSO, or his designate shall have the authorities and responsibilities recommended in Section 2.1 of NRC Regulatory Guide 8.31. The CRSO shall also receive 40-hours of related health and safety refresher training every two years.

The Field Radiation Safety Officer (FRSO) is responsible to the CRSO and works very closely with the Site Manager. Individuals designated as Radiation Technician (RT) and Radiation Monitor (RM) shall report to the Site Manager and the FRSO on matters dealing with radiological safety. In addition, the CRSO, or his designate shall be accessible to the FRSO, RT, and RM at all times. In addition to the responsibilities and qualifications specified in the license application, the FRSO, RM, and RT shall have qualifications as specified in Section 2.4 of Regulatory Guide 8.31, or equivalent. Any person newly hired as an FRSO, RT, and RM shall have all work reviewed and approved by the CRSO as part of a comprehensive training program until appropriate course training is complete, and for at least 6 months from the date of appointment.

For the purposes of this license condition, reference to "uranium mill" or "milling" in NRC Regulatory Guide 8.31 shall mean the licensee's facility and authorized activities.

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[Applicable Amendment: 11]

9.11 The licensee shall conduct:

- a) annual training for its facility inspectors that covers all areas included in the daily inspections of the 11e.(2) byproduct material and the disposal area.
- b) annual operational training that covers all aspects of operational safety and emergency procedures for all employees. The SOPs will be used to conduct operations training to assure consistency and thoroughness.

9.12 The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criterion 9, adequate to cover the estimated costs, if accomplished by a third party, for completion of the NRC-approved reclamation/decommissioning plan including; above-ground decommissioning and decontamination and groundwater restoration, as warranted.

Annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criterion 9, shall be provided to the NRC at least 3 months prior to August 31 of each year. If the NRC has not approved a proposed revision 30 days prior to the expiration date of the existing surety arrangement, the licensee shall extend the existing arrangement, prior to expiration, for 1 year. Along with each proposed revision or annual update of the surety, the licensee shall submit supporting documentation showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15 percent contingency, changes in engineering plans, activities performed, and any other conditions affecting estimated costs for site closure. The licensee must also ensure that the surety covers the above-ground decommissioning and decontamination, soil and water sample analyses, and groundwater restoration associated with the site. The basis for the cost estimate is the NRC-approved reclamation/decommissioning plan or the NRC-approved revisions to the plan.

Envirocare's currently approved surety instrument, Escrow Agreement (Account No. 2407000), issued by Zions First National Bank of Utah on February 7, 1996, in favor of the NRC, shall be continuously maintained in an amount not less than \$3,306,888 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9, until a replacement is authorized by the NRC.

[Applicable Amendments: 1, 6, 8, 9, and 10]

9.13 The licensee shall require a radiation work permit (RWP) for work where the potential for significant exposure to radioactive materials exists and for which no SOP exists. Each RWP shall contain the information specified in Regulatory Guide 8.31.

The CRSO, or designate, qualified by way of special radiation protection training equivalent to that required for the CRSO as defined in License Condition 9.10, shall indicate by signature, the review and approval of each RWP, prior to the initiation of the work.

[Applicable Amendment: 7]

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- 9.14 The licensee shall provide SOPs for controlling internal contamination of workers from dust inhalation, which shall include the use of dust suppressants (e.g., magnesium chloride or water) on all operational roads, as necessary.
- 9.15 The licensee shall have the CRSO, or designate, qualified by way of specialized radiation protection training equivalent to that required for the CRSO as described in License Condition 9.11, perform qualitative respirator fit tests using irritant smoke for all employees required to wear respirators prior to the initial use of a respirator and annually thereafter. During the annual fit test, the CRSO shall ensure that the employee is correctly performing negative pressure fit checks and shall instruct the employee that the fit test is to be performed each time a respirator is donned and prior to entering an area where respirators are required. The licensee shall follow the guidance provided in Regulatory Guide 8.15 "Acceptable Programs for Respiratory Protection." The fit tests and fit instructions shall be documented in the SOPs.
- 9.16 The licensee shall complete "as built drawings" of the facility on a annual basis. The "as built drawings" shall be certified by a professional engineer.
- 9.17 The licensee shall provide for an independent internal audit of facility operations to assure compliance with applicable regulations and license conditions. The independent internal audit will be conducted annually by a qualified health physicist knowledgeable on operations concerning radiation protection programs at milling/waste disposal facilities. The contractor report shall be submitted as part of the annual report.

[Applicable Amendment: 7]

**SECTION 10.0: Operational Controls, Limits, and Restrictions**

- 10.1 The licensee shall restrict eating and drinking to the administrative offices, and enclosed lunch areas that are separated from the disposal areas. With the exception of drinking from closeable containers, there will be no eating, drinking, smoking, defecating, or urinating in the restricted areas, at any time.
- 10.2 The licensee shall analyze and adequately characterize:
- a) all incoming waste to identify any new hazardous constituents not listed in License Condition 11.1. The licensee shall develop and implement methodologies and procedures for systematic characterization and analysis of the incoming waste, so that any new hazardous constituents are identified. Furthermore, the licensee shall assume that the baseline background concentrations for any new constituents are below their detection levels, unless the licensee demonstrates to NRC staff satisfaction that the constituents will not reach the water table in one year and proceeds to establish background based on direct monitoring of these constituents in the Point of Compliance (POC) wells for one full year.
  - b) the following key radon attenuation model parameter values during placement to verify that the values used in the licensee's radon attenuation model have been achieved: 1) porosity (calculated from as-placed density and specific gravity); 2)

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emanation factor (contaminated material only); and 3) diffusion coefficient for the upper ten feet of 11e.(2) byproduct material and the radon barrier material at several moisture levels, including the long-term moisture content value for that material. Testing shall be conducted at least once every 5000 cy of contaminated and radon barrier material placed or at least two every month of material placement. The licensee shall use American Society for Testing and Materials (ASTM) testing procedures, or the equivalent. Average values for each parameter will be calculated and provided in the annual effluent and environmental monitoring report.

[Applicable Amendment: 4]

- c) the distribution of the  $^{226}\text{Ra}$  and  $^{230}\text{Th}$  concentrations in the 11e.(2) byproduct material in the upper 3.3 meters (10 feet) of the contaminated material to verify that the concentration in any lift does not exceed the values used in the radon attenuation model. The licensee shall measure the  $^{226}\text{Ra}$  and  $^{230}\text{Th}$  concentrations using standard analytical procedures, for every 3000 cy of material placed for compaction or at least once a week during material placement. The data will include the elevation (or lift number) of the sample location. The results will be presented as average values for each lift in the annual effluent and environmental monitoring report.

[Applicable Amendment: 4]

- 10.3 The licensee shall assume full responsibility for cleaning up the groundwater of all hazardous constituents detected at the POC in concentrations that exceed the limits specified in License Condition 11.1. It shall be assumed that the 11e.(2) disposal facility is the source of all of the hazardous constituents detected in the POC wells, unless it can be demonstrated to the NRC's satisfaction, based on field and laboratory data, that the 11e.(2) facility is not the source of particular constituents. NRC shall have the final decision concerning any claim by the licensee that the 11e.(2) facility is not the source of a particular constituent that is detected at the POC.

The licensee shall undertake corrective action to clean up groundwater contamination if and when required, no later than 18 months from the date when exceedence of a standard has first been discovered, and without taking credit for any delays caused by disagreements as to the source of contamination. The licensee shall consider and evaluate existing and new groundwater clean-up technologies before selecting and implementing an appropriate clean-up program.

[Applicable Amendment: 7]

- 10.4 The licensee shall continue groundwater and land surface monitoring at all POC locations throughout the post closure period until the disposal facility is transferred to long-term government custody.
- 10.5 The licensee shall implement the quality assurance plan as provided in the license application.
- 10.6 The licensee shall, upon arrival of the waste and before acceptance on site, visually inspect

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the waste or use the Environmental Protection Agency Paint Filter Liquid Test (SW-846, Method 9095) to determine if the waste contains free liquid. The licensee shall not accept any waste containing free liquid for disposal. The licensee however, shall be subject to the following minimum frequency of Paint filter Liquid Test analyses and sample collection requirements: (1) for each waste stream, the minimum number of samples to be analyzed shall be one sample for each shipment (rail or highway) for the first 1,000 yd<sup>3</sup> (or any part thereof), and (2) thereafter the minimum number of samples to be analyzed shall be one sample for each set of ten (10) shipments.

[Applicable Amendment: 13]

- 10.7 The licensee shall, upon arrival of waste, perform external exposure rate measurements of the waste conveyances. Any shipment with exposure rates greater than 5 mrem per hour at a distance of 30 cm from any surface, and which cannot be disposed of within 24 hours, shall be posted as a Radiation Area in compliance with 10 CFR 20.1902(a) until disposed.

[Applicable Amendment: 1]

- 10.8 The licensee shall operate the facility in compliance with the following specifications:

- a) The maximum bulk mass of waste disposed of annually will not exceed  $4.536 \times 10^5$  tonnes ( $5 \times 10^5$  tons).
- b) The maximum annual disposal area will not exceed 229 m x 168 m (equivalent to 38,472 m<sup>2</sup>).
- c) Deleted by Amendment 1
- d) The total embankment capacity will not exceed  $2.52 \times 10^6$  m<sup>3</sup> ( $3.3 \times 10^6$  yd<sup>3</sup>).
- e) The maximum volume of waste that may be stored on site prior to disposal will not exceed  $2.743 \times 10^4$  m<sup>3</sup> ( $9.687 \times 10^5$  ft<sup>3</sup>) at any one time.
- f) Waste with an average concentration above 2,000 pCi/g for any radionuclide in the uranium series or above 6,000 pCi/g for any radionuclide in the thorium series in any truck load or railcar will not be accepted.
- g) Deleted by Amendment 1
- h) Deleted by Amendment 1
- i) The licensee shall manage waste receipt, storage, and disposal operations in such manner as to assure compliance with the effluent concentration limits of Table 2, Appendix B to 10 CFR 20.1001 - 20.2401 and population dose limits of 10 CFR 20.1301

The licensee shall maintain the detailed documents demonstrating compliance with the above specifications on-site and summarize the data in the annual report.

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[Applicable Amendment: 1]

**SECTION 11: Inspection, Monitoring, and Recording Requirements**

11.1 The licensee shall implement groundwater monitoring programs throughout the duration of this license, to include the following:

- a) Specifically, the licensee shall conduct detection monitoring, compliance monitoring, corrective action monitoring, and post-closure monitoring in accordance with Criteria 5 and 7 of 10 CFR Part 40, Appendix A, the license application dated November 19, 1993, and applicable supporting documents listed in License Condition 9.3, and as required based on the results of groundwater monitoring. The monitoring shall involve sampling and analysis of representative samples from the POC wells defined in the license application. All water samples shall be collected on a quarterly schedule, at least three months apart.
- b) Detection monitoring shall be conducted after the disposal operation is started as described in Criterion 7A of 10 CFR Part 40, Appendix A. Detection monitoring shall include the constituents listed below, or any added through amendment in accordance with License Condition 10.2(a).

Arsenic	Nickel	Acetone
Barium	Selenium	2-Butanone
Beryllium	Silver	Chloroform
Cadmium	Radium-226	Carbon Disulfide
Chromium	Radium-228	1,2-Dichloroethane
Cyanide	Thorium-230	Methylene Chloride
Fluoride	Thorium-232	Naphthalene
Lead	Uranium	2-Methylnaphthalene
Mercury	Molybdenum	Diethylphthalate

- c) Pursuant to License Condition 9.4, the licensee may establish site-specific compliance standards as the higher of 1) background concentrations, or 2) MCLs provided in 10 CFR Part 40, Appendix A, Table 5C - for those constituents already identified in its NRC-approved detection monitoring program. The licensee must submit to NRC for approval, any proposed site-specific standards for newly identified hazardous constituents that are identified in the incoming waste for which a background concentration level has not been approved by NRC in accordance with License Condition 10.2a.
- d) Compliance monitoring shall be implemented by the licensee in accordance with Criteria 7A and 5B(1) of 10 CFR Part 40, Appendix A for those constituents qualifying as hazardous constituents under Criterion 5B(2) of 10 CFR Part 40, Appendix A. The compliance monitoring period for a particular constituent shall continue from the time a site-specific groundwater protection standard for that constituent is established, until this license is terminated. Table STD-1 in the license application provides a list of hazardous constituents that have been detected in the groundwater above background and for which site-specific standards have been established for the

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disposal site.

- e) Corrective action may be required by NRC if the established standards are exceeded. Corrective action monitoring shall be implemented in conjunction with a corrective action program in order to demonstrate the effectiveness of corrective actions undertaken by the licensee.
- f) Post-closure monitoring shall involve monitoring undertaken after the disposal operation is stopped and until license termination.
- g) If a baseline background ground-water quality value listed in the attached Table S-1 for any of the above constituents is exceeded, or if a new hazardous constituent, identified based on waste characterization (see License Condition 10.2(a)) is detected in a POC well, the licensee shall take a confirmatory sample within 72 hours, excluding weekends and holidays, and have it analyzed. Upon receipt of the sample analysis, if the second sample does not indicate exceedence/detection, a third sample shall be taken within 72 hours, excluding weekends and holidays, and analyzed. If neither the second nor third samples indicate exceedence/ detection, the first sample shall be considered in error. If the second or third sample indicates exceedence/detection, the licensee shall notify NRC and meet the reporting requirements as stated in License Condition 12.2.

In addition, within 30 days from the receipt of the analysis results, the licensee shall develop and implement proposed site-specific standards for groundwater protection and develop a written compliance monitoring plan. The compliance monitoring plan will be in accordance with the sampling schedule specified in Part a) of this license condition and in the applicable regulations, for individual constituents that have been detected in the POC wells in excess of the background values.

All water sampling and analysis activities shall be carried out in accordance with the sampling procedures of a certified laboratory. The sampling of the monitoring wells shall be conducted according to acceptable industry standards and in conformance to the proposed quality assurance measures provided in Appendix Z of the license application.

[Applicable Amendments: 1, 2, and 7]

- 11.2 The licensee shall analyze or submit for analysis by a certified laboratory any monitoring samples within two weeks of the end of the appropriate monitoring compliance period. Inclusion of results into occupational exposure calculations shall be performed within 1 week of receipt of the analysis results. Non-routine samples shall be submitted for analysis by a certified laboratory or the licensee shall begin analysis within 2 working days after sample collection and the CRSO shall review results within 2 working days of receipt of results.
- 11.3 The licensee shall require that the CRSO and the Site Engineer perform and document joint inspections of all work areas at least monthly. The licensee shall correct any deficiency noted during the inspection within 7 working days. The results of the inspections and any necessary corrective actions should be reported in the annual report.

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**11.4 The licensee shall:**

- a) Monitor the following to demonstrate compliance with Subpart C of Part 20, in addition to any personnel monitoring required by 10 CFR 20.1502:
- (1) Continuously monitor at least the following areas for airborne concentrations of  $^{222}\text{Rn}$  and  $^{220}\text{Rn}$  as per Section 7.3.2 of the license application (see License Condition 9.3):
    - (i) Waste Unloading Area
    - (ii) Waste Storage Area
    - (iii) Covered Waste Area
    - (iv) Security Guard Trailer
  - (2) Shall perform Airborne Particulate Monitoring as per Section 7.3.1 of the license application (see License Condition 9.3);
  - (3) Shall perform gamma radiation exposure measurements of the work area as per Section 7.3.3 of license application (see License Condition 9.3); and
  - (4) Shall demonstrate that the monitoring locations are representative of the occupational exposure to radiation and radioactive materials.
- b) Monitor the following to demonstrate compliance with Subpart D of Part 20:
- (1) Continuously monitor the site perimeter as per Section 7.4 of the license application (see License Condition 9.3) for  $^{222}\text{Rn}$  and  $^{220}\text{Rn}$  airborne concentrations;
  - (2) Shall monitor the effluent release of airborne particulates as per Section 7.4 of the license application (see License Condition 9.3) at the air sampling stations listed in Table 7.2 of the license application (see License Condition 9.3);
  - (3) Shall perform gamma radiation exposure measurements of the unrestricted area as per Section 7.3.3 of the license application (see License Condition 9.3); and
  - (4) Shall assume that the measured net values originated solely from the 11e.(2) disposal facility.
- c) Calculate total effective dose equivalent (TEDE) for its occupational workers and the public to demonstrate that the 5000 mrem (50 mSv) and 100 mrem (1 mSv) dose limits, respectively are not exceeded.

**SECTION 12: Reporting Requirements**

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12.1 Deleted by Amendment 4

12.2 The licensee shall notify the NRC in the event a baseline background water quality value or a groundwater quality standard established for the site is exceeded; or if a new hazardous constituent that was not originally included in the initial list of hazardous constituents, but was subsequently identified in the incoming waste, is detected in the POC wells - as confirmed by groundwater monitoring. The licensee shall notify Region IV and the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards by telephone within 7 days and by letter within 30 days from the time the exceedence is confirmed, or a new hazardous constituent identified by laboratory analyses (see License Condition 11.1).

The licensee shall submit to the NRC a consolidated groundwater sampling report that summarizes the quarterly groundwater data and analyses as part of the licensee's annual reporting requirement.

[Applicable Amendment: 7]

12.3 The licensee shall perform an annual ALARA audit of the radiation safety program which shall be led by the CRSO or designate, qualified by way of specialized radiation protection training equivalent to that required for the CRSO as defined in License Condition 9.10, in accordance with Section 2.3.3 of Regulatory Guide 8.31. The audit team should contain a representative from corporate management. A report of this audit shall be submitted to corporate headquarters and the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards, within 60 days after conducting the audit. The report shall include detailed summaries of the analytical results of the radiological surveys. In order to evaluate the ALARA objective, the licensee shall, at a minimum, review the following records:

- a) Bioassay results including any actions taken when the results exceeded action levels in Table 1 of Regulatory Guide 8.22, "Bioassay at Uranium Mills," dated January 1987.
- b) Records of external and internal exposure.
- c) Safety meeting minutes, attendance records, and training program records.
- d) Daily inspection log entries and summary reports of the monthly reviews.
- e) Radiological survey and monitoring data, as well as environmental radiological effluent and monitoring data.
- f) Surveys required by radiation work permits.
- g) Reports on overexposure submitted to NRC and the State of Utah.
- h) Reviews of operating and monitoring procedures completed during the period.

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The audit shall also address any noticeable trends in personnel exposures for identifiable categories of workers and types of activities, any trends in radiological effluent data, and the performance of exposure and effluent control equipment as well as its utilization, maintenance, and inspection history. Any recommendations to further reduce personnel exposures or environmental releases of uranium or radon and radon progeny shall be included in the report.

- 12.4 The licensee shall conduct an annual land use survey for a 5 km radius around the site. The purpose is to assess population growth or industry growth in the immediate vicinity of the Clive facility and provide an inventory of domestic and agricultural wells within the survey area. The licensee shall document this survey in the annual report.
- 12.5 The licensee shall immediately notify Region IV and the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards by telephone within 24 hours and by letter within 7 days of any waste shipment where a violation of applicable regulations or license conditions has been found.
- 12.6 The licensee shall, unless otherwise specified, submit an annual report documenting: 1) the annual reporting requirements as specified in the license conditions, 2) the results of calibration of equipment, 3) reports on audits and inspections completed during the year, 4) the results of all meetings and training courses required by this license, and 5) any other significant subsequent information, reviews, investigations, and corrective actions. This report, covering the calendar year, shall be submitted to the NRC by March 1 following the first full year after receipt of this license, and by March 31 every year thereafter. Unless otherwise specified in the NRC regulations, all such documentation shall be maintained at the site and corporate headquarters for a period of at least five (5) years.

[Applicable Amendment: 4]

- 12.7 The licensee shall, at least three months prior to license termination, provide a report which demonstrates the site has met all applicable provisions for license termination and transfer of the facility to the government for long-term custody in accordance with 10 CFR Part 40, Appendix A, Criterion 11. Specifically, the licensee shall document that: (1) the concentrations of all of the listed hazardous constituents at the POC are within their designated concentration limits (standards); (2) if a corrective action program was carried out that the hazardous constituents contaminating the ground-water were returned to their designated limits; and, (3) the facility has been properly decontaminated and decommissioned in accordance with the decontamination and decommissioning plan proposed by the applicant in the license application approved by the NRC. The license termination will not occur until the licensee has demonstrated that these actions have been completed.
- 12.8 The licensee shall immediately report: 1) any failure of the 11e.(2) byproduct material disposal cell that results in a release of waste into unrestricted areas; or 2) any unusual conditions that if not corrected could indicate the potential or lead to the failure of the system and result in a release of waste into an unrestricted area; to NRC Region IV and the Chief, Uranium Recovery Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards.

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number	SMC-1559, Amendment 13
Docket or Reference Number	40-8989

FOR THE NUCLEAR REGULATORY COMMISSION

Date: May 19, 1998 Joseph J. Holonich  
Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Table STD-1  
 NRC-Approved Site-Specific Standards  
 (As of November 20, 1996)

Constituent	Point of Compliance Monitoring Wells											
	19A	20	24	25	26	27	28	29	57	58	60	63
Inorganic Constituents (mg/l):												
Arsenic <sup>III</sup>	0.05	0.05	0.05	0.11	0.20	0.050	0.070	0.05	0.05	0.12	0.05	0.05
Radioactive Constituents (pCi/l):												
None												
Organic Constituents (ug/l):												
None												

Site-specific standard for arsenic in different Point of Compliance (POC) wells was established as the higher of: (a) 0.05 mg/l, which is the value for maximum concentration for ground water protection provided for this constituent in 10 CFR Part 40, Table 5C, Appendix A; and (b) approved background concentration in Table S-1 (Revision 1, dated November 20, 1996).

Table S-1  
NRC-Approved Background Concentrations

Constituent	Point of Compliance Monitoring Wells											
	19A	20	24	25	26	27	28	29	57	58	60	63
<b>Inorganic Constituents (mg/l):</b>												
Arsenic <sup>(1)</sup>	0.038	0.042	0.032	0.11	0.2	0.059	0.078	0.023	0.028	0.12	0.028	0.034
Barium <sup>(1)</sup>	0.02	0.023	0.038	0.044	0.044	0.053	0.033	0.038	0.048	0.048	0.037	0.097
Beryllium <sup>(2)</sup>	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Cadmium <sup>(2)</sup>	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Chromium <sup>(2)</sup>	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Cyanide <sup>(2)</sup>	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Fluoride <sup>(1)</sup>	1.12	0.86	0.83	1.04	0.98	1.18	1.02	0.93	0.98	1.11	0.84	1.08
Lead <sup>(2)</sup>	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Mercury <sup>(2)</sup>			0.00029	0.0002	0.0002	0.00028	0.00038	0.00038	0.00038	0.0008	0.00049	0.00048
Molybdenum <sup>(1)</sup>	0.00034	0.00049	0.33	0.3	0.70	0.86	0.37	0.53	2		0.31	0.31
Nickel <sup>(2)</sup>	0.76	0.33	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.38	0.01	0.01
Selenium <sup>(2)</sup>	0.01	0.01	0.008	0.006	0.014	0.006	0.006	0.006	0.006	0.01	0.016	0.006
Silver <sup>(2)</sup>	0.006	0.055	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
	0.006	0.006								0.006		
<b>Radioactive Constituents (pCi/l):</b>												
Radium-228 + 228 <sup>(1)</sup>			6.47	6.38	4.97	3.85	3.59	8.15	3.38		4.07	4.13
Thorium-230 <sup>(1)</sup>	3.28	5.87	1.78	2.8	1.67	4.82	1.18	2.28	3.89	5.15	0.0	2.82
Thorium-232 <sup>(1)</sup>	2.28	1.04	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.84	0.0	0.0
	0.0	0.0								0.0		
<b>mg/l:</b>												
Uranium <sup>(1)</sup>	0.0051	0.013	0.02	0.13	0.033	0.027	0.011	0.040	0.0075	0.038	0.02	0.011
<b>Organic Constituents (ug/l):</b>												
Acetone <sup>(2)</sup>			20	20	20	20	20	20	20		20	20
2-Butanone <sup>(2)</sup>	20	20	20	20	20	20	20	20	20	20	20	20
Chloroform <sup>(2)</sup>	20	20	20	20	20	20	20	20	20	20	20	20
	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Carbon disulfide <sup>(2)</sup>	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
1,2-Dichloroethane <sup>(2)</sup>	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Methylene Chloride <sup>(2)</sup>	2.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.0	4.0	4.0
Naphthalene <sup>(2)</sup>	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Diethylphthalate <sup>(2)</sup>	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2-Methylnaphthalene <sup>(2)</sup>	4.0	4.0								4.0		

(1) Background levels in all wells set at (mean + 2 standard deviations).

(2) Background levels in all wells set at analytical detection limit because (mean + 2 standard deviations) is less than the detection limit.

(3) Background levels set at (mean + 2 standard deviations) or analytical detection limit, whichever is larger.

[Applicable Amendments: 2, 3, 6, and 7]



Material License No. SUA-1358. IUSA sought a performance-based licensing scheme that would allow them to accept alternate feed materials without prior NRC approval. Letter from Hoellen to Holonich of 3/3/98, at 2-3.

On May 8, 1998, IUSA submitted a letter request to NRC for another amendment to their Source Material License No. SUA-1358. IUSA requested an amendment that would allow them to receive and process uranium-bearing material from the Ashland 2 Formerly Utilized Sites Remedial Action Program ("FUSRAP") site, near Tonawanda, New York. Letter from Rehmann to Holonich on 5/8/98, at 1.

Also on May 8, 1998, IUSA submitted a Petition for Reconsideration of the Nuclear Regulatory Commission's "Final Position and Guidance on the Use of Uranium Feed Material Other Than Natural Ores" (the "Petition"). The Petition sought to dismiss concerns about "*sham disposals*" and attempted to persuade the NRC to change its position on how to determine whether a mill would process material *primarily* for its source material content. IUSA hoped that the NRC would adopt the position that, *by definition*, a licensed uranium mill *always* mills ore, including alternate feed materials, primarily for its source material content, thus bypassing the NRC's current requirements.

Additionally on May 8, 1998, William J. Sinclair ("Sinclair"), the

Director of the Radiation Control Division of the Utah Department of Environmental Quality, received a Notice of Significant Meeting dated May 1, 1998, by facsimile from James R. Park, Project Manager, Uranium Recovery Branch, Division of Waste Management, NMSS, that detailed a meeting scheduled for May 12, 1998, from 11:00 a.m. - 12:00 noon to "discuss NRC's policy concerning the disposal of non-11e. (2) byproduct material in uranium mill tailings impoundments." Representatives of IUSA and the National Mining Association participated in the meeting.

On May 11, 1998, Sinclair sent a letter to Joseph J. Holonich, Chief of the Uranium Recovery Branch of the NRC's Division of Waste Management, describing Utah's concerns about any proposed amendments to IUSA's Source Material License. Utah opposes any performance-based licensing scheme that bypasses public input.

On May 13, 1998, IUSA withdrew the Petition of May 8<sup>th</sup> and refiled a new petition on that day. The new petition omitted a discussion that related to hazardous constituents but retained the overall thrust of the first petition.

Letter from Hoellen to Sinclair on 5/13/98, at 1.

On June 5, 1998, representatives and counsel from IUSA met with Sinclair and Dr. Dianne R. Nielson ("Dr. Nielson"), Executive Director of the

Utah Department of Environmental Quality, to discuss issues ranging from failure of IUSA to provide timely information on the performance-based licensing to the Ashland 2 amendment approval. Later that afternoon, IUSA presented information to the Utah Radiation Control Board concerning the status of White Mesa Mill operations.

On June 10, 1998, Dr. Nielson, sent a letter to Dr. Shirley A. Jackson ("Dr. Jackson"), Chairman, Nuclear Regulatory Commission. The letter indicated that the Department had received a letter of May 29, 1998, from Joseph J. Holonich ("Holonich"), NRC Uranium Recovery Branch Manager. In the letter, Holonich indicated that the NRC had received a White Paper submitted by the National Mining Association that requested fundamental changes to the regulation of uranium mills including modification of the current alternate feed guidance. In the letter to Dr. Jackson, Dr. Nielson indicated that Utah has an active mill that has received alternative feed materials in the past and that there appears to be an enhanced interest in finding facilities that can process waste materials, especially those from the Department of Energy. Dr. Nielson further indicated that as uranium mills expand their operations to receive primarily alternate feed materials instead of ores, the NRC should appropriately consider a separate standard for such "reprocessing"

facilities. Holonich's letter alluded to the establishment of a new part to 10 CFR Part 40, which would address uranium recovery facilities. Dr. Nielson concluded that this appeared to be a correct course of action, i.e., recognizing the difference between processing of traditional ores and reprocessing of waste materials that resemble ores such that a facility does not have to significantly modify the millworks. Dr. Nielson urged stakeholder involvement in future discussions of changes and encouraged the NRC to look at the policy issue that shifts "reprocessing" to "waste disposal in disguise."

On June 23, 1998, Sinclair received a facsimile transmission from IUSA that detailed NRC's amendment of IUSA's Source Material License No. SUA-1358 (Exhibit 1). The amendment allowed IUSA to receive, process, and dispose of uranium-bearing material from the Ashland 2 FUSRAP site.

On June 30, 1998, the Department of Environmental Quality held two conference calls with IUSA's staff and counsel. The first conference call, held between Michelle Rehmann of IUSA, Sinclair, and Robert Herbert of the Division of Radiation Control, focused on the concepts associated with performance-based licensing of alternate feed materials. Division of Radiation Control staff tried to gain an understanding of where in the performance based licensing process the State of Utah could receive information relating to

alternate feed approvals by the White Mesa Mill as well as what remedies the State would have if it disagreed with a particular alternate feed approval. Later that day, Utah officials held another conference call with IUSA staff and counsel, including Michelle Rehmann, Earl Hoellen, Anthony Thompson and others. The conference call mainly focused on issues raised in two articles appearing in Salt Lake City, Utah newspapers relating to the Ashland 2 FUSRAP approval by the NRC. In a follow-up letter dated July 1, 1998, Earl L. Hoellen, IUSA's President and Chief Executive Officer, addressed IUSA's concerns about these articles and criticized statements attributed to DEQ employees as shedding an unfavorable light on the Ashland 2 proposal.

B. Factual Background

IUSA operates uranium mining and processing facilities in the western United States, including the White Mesa Mill (the "Mill") near Blanding, Utah. The Mill processes conventional uranium ores and other types of ores with an acid leaching system and then disposes of the 11e. (2) byproduct material in its tailings impoundment. In addition, the mill has a co-product recovery circuit for vanadium. The NRC regulates the Mill under Source Material License No. SUA-1358, granted following the Mill's construction in 1980 and renewed in

1997. The license covers receipt and processing of uranium ores, limiting the total production of  $U_3O_8$  to 4380 tons per year, and regulates the disposal and reclamation of the uranium byproduct materials in accordance with 10 CFR Part 40, Appendix A.

The June 23, 1998 amendment to the Mill's license allows IUSA to receive and process uranium-bearing materials from the Ashland 2 FUSRAP site, which is currently under the management of the U.S. Army Corps of Engineers. IUSA plans to receive and process approximately 24,000 to 25,000 dry tons of material from the Ashland 2 site. The uranium content of these materials has been difficult to estimate, and IUSA admits that the content probably ranges from nondetectable to approximately 1.0 percent. While the NRC claims the material may meet the definition of the Atomic Energy Act's 11e. (2) byproduct material, it is not subject to NRC regulation until received by IUSA because it was produced by an activity not licensed by the NRC after November 8, 1978. Letter from Holonich to Rehmann on 6/23/98, Enclosure (1), at 6.

### III. Discussion

#### A. Requirements for Intervention

The scope of 10 CFR Part 2, Subpart L, Informal Hearing Procedures for Adjudications in Materials and Operator Licensing Proceedings, includes a request for a hearing in a proceeding for the amendment of a materials license subject to 10 CFR Part 40. The State of Utah's request for a hearing and petition to intervene in IUSA's request to amend its Part 40 license is thus subject to Subpart L.

When a person other than the applicant requests a hearing, the requestor must demonstrate standing, taking into consideration (1) the nature of the requestor's rights under the Atomic Energy Act, (2) the nature and extent of the requestor's property, financial, or other interests in the proceedings; and (3) the possible effects of any order that may be entered in the proceeding upon the requestor's interest. 10 CFR § 2.1205(h). Additionally, the Commission looks to judicial concepts of standing in determining whether a petitioner's interest may be affected by a licensing proceeding. Thus, petitioner's injury must arguably fall within the zone of interests sought to be protected by the Atomic Energy Act (AEA) and the National Environmental Policy Act (NEPA). Atlas Corporation (Moab, Utah facility), LBP-97-9, 45 NRC 414, 416 (1997) (*referring*

to Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996)). The petition must allege injury-in-fact; the injury must be fairly traceable to the challenged action; and the injury must be redressable by the Commission. Id.; Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61 (1992). While the petitioner has the burden of establishing standing, the presiding officer is to "construe the petition in favor of the petitioner." Georgia Institute of Technology (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 115 (1995); Atlas, 45 NRC at 416.

Finally, the requestor must describe in detail (1) the requestor's interest in the proceedings; (2) how those interest may be affected by the results of the proceeding; (3) the requestor's areas of concern about the subject licensing action; and (4) the timeliness of the hearing request. 10 CFR § 2.1205(e).

B. The State Has a Right To Be Made a Party to the Proceeding

Section 189a of the Atomic Energy Act, 42 USC § 2339(a), grants the right to a hearing "upon the request of any person whose interest may be affected by the [licensing] proceeding and shall admit such person as a party to the proceeding." As more fully discussed below, the State has a right to participate in the proceeding to protect the State's citizens, its proprietary and

sovereign interests, and its interest as trustee for all waters owned by the citizens of the State.

First, under the doctrine of *parens patriae*, the State has a quasi-sovereign right to protect the interests of its citizens. Hawaii v. Standard Oil Co. of California, 405 U.S. 251, 258 (1972) (State may act to prevent or repair harm to its quasi-sovereign interests); Alfred L. Snapp & Son v. Puerto Rico, 458 U.S. 592, 600-607 (1982) (State has a quasi-sovereign interest in the physical and economic health and well-being of its residents).

Second, the State has the right to protect its proprietary and sovereign interest in its lands, waters, wildlife, and other natural resources. For example, under State law "[a]ll wildlife existing within the state, not held by private ownership and legally acquired, is the property of the state." Utah Code Ann. § 23-13-3.

Third, the State has the right to protect its interests as trustee for all the surface and groundwater in the State. See Utah Code Ann. § 73-1-1 ("All waters in this state, whether above or under the ground, are hereby declared to be the property of the public, subject to all existing rights to the use thereof."); J.J.N.P. Co. v. State Division of Wildlife Resources, 655 P.2d 1133, 1136 (Utah 1982) ("The State regulates the use of the water, in effect, as trustee for the

benefit of the people."); Tanner v. Bacon, 103 Utah 494, 136 P.2d 957 (1943).

In addition, the State is recognized as the trustee for natural resources, including surface and groundwater resources, for damage recovery actions under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 USC § 9607(f).

Finally, the State will suffer injury-in-fact if the NRC allows IUSA to process the alternate feed material from the Ashland 2 FUSRAP site. In particular, allowing IUSA to receive, process, and dispose of the uranium-bearing material without the normal public input for NRC license amendments will remove Utah's established right to participate in such proceedings.

Additionally, the amendment allows for processing and disposal of material that has a very low uranium concentration, making it unlikely that the material is being processed *primarily* for its source material content. Instead, the amendment will allow the Mill to become a disposal facility and will let IUC circumvent the *stricter* disposal requirements of 10 CFR Part 61. See Subsection D. below. Moreover, the NRC has licensed an 11e. (2) disposal cell under 10 CFR Part 40 at a Utah facility that does not have uranium processing capabilities and has held that licensee to a "higher standard." Thus, two facilities that can dispose of the same material are held to different safety

standards. Clearly, the amendment would substantially diminish Utah's ability to ensure protection of its environment, natural resources, and citizens.

Accordingly, the State has standing to intervene in this proceeding because the proposed amendment threatens to cause "distinct and palpable" injury to the State and its citizens. Kelley v. Selin, 42 F.3d 1501, 1508 (6th Cir.), *cert. denied*, 115 S. Ct. 2611 (1995), *quoting* Warth v. Seldin, 422 U.S. 490, 501 (1975).

C. The State Has Significant Interests in this Proceeding

As demonstrated above, the State has significant interests that it seeks to protect through intervention in this proceeding. First, the State has an interest in protecting the health and safety of its numerous citizens who live, work, or travel at or near IUSA's milling facility and tailings impoundment. This is further emphasized due to concerns raised by Native Americans residing in the State. The Navajo Utah Commission of the Navajo Nation Council passed a resolution on July 9, 1998, and transmitted a copy to the NRC's staff. The resolution raises concerns regarding the transportation of nuclear waste material into Blanding, Utah and the processing of such waste and other uranium byproducts at IUSA's White Mesa Mill.

In addition to health and safety, the interests protected by the State

include the economic welfare of its citizens. This includes protecting the integrity of ground and surface water, which local residents depend upon for drinking water and irrigation and which livestock and wildlife also use. It also includes protecting the area's tax base, which may be adversely affected by a drop in tourism and property values and loss of economic development caused by any future releases from IUSA's tailings impoundments.

Finally, the State also has an interest in protecting the integrity of its wildlife and natural resources, including air, soil, ground and surface water, from contamination caused as a result of any releases from IUSA's tailing piles.

D. The State's Interests Will be Affected by the Proceeding

If the NRC allows IUSA to receive, process, and dispose of the Ashland 2 materials, it will irreparably harm Utah's interests. The concept of "sham disposals" is *not* a "classic red herring" as IUSA claims. Rather, sham disposals represent a *vital concern* that could significantly damage Utah's capabilities to protect its environment, natural resources, and citizens. If the NRC allows IUSA to process and dispose of alternate feed materials that contain very little source material, they effectively make the Mill a low level radioactive waste disposal facility. A low-level waste disposal facility must meet requirements of

R313-25 (equivalent to 10 CFR Part 61) and is subject to provisions of the Utah Radiation Control Act , Utah Code Ann. 19-3-105, which require approval of a siting application, approval of a license application, local approval, and legislative and gubernatorial approval. Moreover, the NRC itself has set the precedent of a "higher standard" for disposal facilities and has indicated in Holonich's letter to the State of May 29, 1998, that there may be a need to regulate uranium processing facilities differently than traditional uranium mills that only process ores from mining operations. In addition, the State of Utah has required an NRC-licensed 11e. (2) disposal facility to apply for and receive a State of Utah Ground Water Discharge Permit.

The following is an example of the difference in the State's regulatory scheme versus that of the NRC's strategy for the White Mesa Mill. The State of Utah developed a list of 28 non-radiological parameters with the basis being an NRC report which surveyed Title II mills and contents of their tailings. For example, nickel, molybdenum, and beryllium were metals typically identified as being associated with uranium ores. TOC and TOX were added as an additional scan for other parameters. Also, organics are typically found in tailings, and those associated with tailings operations were added to the list. Experience with regulating the groundwater at the NRC licensed 11e. (2)

facility in Utah has identified an ongoing need to be familiar with the wastes being received as uranium mill tailings. The tailings being received at the NRC licensed facility are variable, and a recent DRC staff report recommended the monitoring program should include such parameters as pesticides, PCBs, and semi-volatile compounds like anthracene and chrysene as a result of the addition of "new" 11e. (2) waste streams.

Currently, IUSA's Source Material License requires monitoring for four parameters in the groundwater. This is a questionable requirement even for a uranium mill processing ore, and as alternate feed materials become a common element of the mill operation, undetected releases of a radiological or non-radiological constituents could occur due to the limited monitoring and because of the potential for many additional constituents to be received in alternate feed as compared to conventional ores. Contrary to IUSA's beliefs, properly licensed low level radioactive waste disposal facilities represent a safer and more strictly regulated facility than a tailings impoundment. Thus, the license amendment allows IUSA to bypass the stricter requirements of R313-25 (equivalent to 10 CFR Part 61), disposing of the material in a less regulated, less safe facility and threatening to harm Utah's environment, natural resources, and citizens. Furthermore, this license amendment will set a dangerous

precedent that could lead to massive amounts of similar material being "processed" at the Mill rather than being disposed of in a proper, safer low level waste disposal facility. While Utah may not oppose IUSA processing of alternate feed materials with a high enough source content to be economically viable, anything less circumvents the law and harms Utah's interests.

Additionally, Utah has concerns about the hazardous waste content of the Ashland 2 material. If the NRC allows IUSA to receive the Ashland 2 material without adequate testing for hazardous materials, they will completely remove Utah's right to regulate these constituents. Furthermore, by amending IUSA's license to allow for receipt, processing, and disposal of potentially hazardous materials, the NRC would act contrary to their own guidance and could damage the surrounding environment, natural resources, and citizens of Utah.

E. The State's Areas of Concern

Utah simply wants the NRC to properly apply its own guidance to IUSA's request. Under the NRC's staff guidance "Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores," ("Staff Guidance") 60 Fed. Reg. 49,296 (1995), the NRC staff must make the following

determinations when reviewing requests to process material other than natural uranium ores:

- (1) Whether the feed material meets the definition of "ore";
- (2) Whether the ore is being processed primarily for its source material content; and
- (3) Whether the feed material contains hazardous waste.

Utah does not dispute that the Ashland 2 material probably falls within the NRC's broad definition of "ore." However, Utah does have concerns that the NRC has not adequately applied the final two criteria and feels that the NRC has erred in its assessment, Technical Evaluation Report ("TER"), Request to Receive and Process Ashland 2 FUSRAP Material, Docket No.40-8681.

First, Utah disputes IUSA's claim, and the NRC's approval of the claim, that IUSA plans to process the Ashland 2 materials primarily for its source material content. As stated in the Staff Guidance, a proposed processing is primarily for the source-material content if the requestor satisfies either the co-disposal test or the licensee certification and justification test. IUSA has failed to meet either of these tests. Under the co-disposal test, the NRC approves feed material for disposal in a tailings impoundment if the material would be approved under the "Final Revised Guidance on Disposal of Non-Atomic

Energy Act of 1954, Section 11e. (2) Byproduct Material in Tailings Impoundments." 60 Fed. Reg. 49,296, 49297 (1995). The amendment simply states, without any justification, that the Ashland 2 material meets this test. Utah asserts that the NRC must apply the test and demonstrate that it is met *prior* to any license amendment. Additionally, the material clearly fails to satisfy the requirement that "[r]adioactive material not regulated under the AEA shall not be authorized for disposal in an 11e. (2) byproduct material impoundment." 60 Fed. Reg. 49,296 (1995). See Letter from Holonich to Rehmann of 6/23/98, Enclosure (1), at 6 ("[T]his material is *not* subject to NRC regulation until it is received by IUSA.") (emphasis added).

Also, Utah believes that the NRC did not appropriately apply the licensee certification and justification test. While IUSA did supply a signed affirmation that the uranium-bearing material is being processed primarily for the recovery of uranium and for no other purpose, Utah finds IUSA's justifications for this conclusion inadequate. The material clearly contains very little recoverable uranium, making source material retrieval a financial disincentive.

The State has attempted to determine the average content of uranium in the Ashland 2 material. Initially, the staff relied on the information supplied to

the NRC, and upon examining the information, discovered that the statement of page 4 of the TER is incorrect. The TER states that "[t]he proposed alternate feed material contains varying concentrations of uranium, ranging from non-detectable to greater than 1.0 percent by weight, depending on the sample location." The NRC staff assumed that "ND" in the Ashland report meant non-detectable whereas the report indicates that "ND" meant not-determined.

The State attempted to assess an average uranium content assuming "ND" meant zero. The uranium content is favorable only if you exclude the "not-determined" data. The content is much less if "not-determined" is zero and added into the average. Further complicating the State's evaluation was the unavailability of the "FUSRAP Remedial Investigation Report For the Tonawanda Site," which contained the complete data set that might have allowed the State to estimate an average uranium content in the material. The State requested this information from IUSA on July 6, 1998, and IUSA provided excerpts from the report on July 15, 1998 to DRC staff.

The State concluded that only after a full review of the Remedial Investigation Report could a determination of average uranium content in the material be made with any degree of confidence.

Even though the material's source content is low, IUSA offered several

arguments that would make processing the Ashland 2 material economically viable; however, Utah finds IUSA's arguments lacking credibility and not supported by sound financial or economic justifications and facts. In all, neither the co-disposal test nor the licensee certification and justification test has been met, and the State requests that the NRC reevaluate the facts surrounding this situation. In doing so, the NRC should determine that IUSA is *not* processing the Ashland 2 material primarily for its source-material content.

Second, Utah has a concern that the Ashland 2 material may contain hazardous constituents. The amendment requires that "ICF Kaiser, the USACE contractor charged with excavating the material and preparing it for shipment offsite, will conduct confirmatory testing of *excavated* materials prior to their shipment to ensure that listed hazardous wastes will not be included in shipments to White Mesa." Letter from Holonich to Rehmann of 6/23/98, Enclosure (1), at 4 (emphasis added). The amendment fails to address the nature and extent of this post-excavation testing, and more testing should be done *prior* to excavation to protect against dilution and mixing. Utah opposes amending IUSA's license when the material proposed for processing is not subjected to a rigorous process to ensure that it does not contain hazardous constituents. Utah submits that defined investigations and testing, *prior to excavation*, is

necessary to ensure that the Ashland 2 material does not contain hazardous constituents. Additionally, the Remedial Investigation Report for the Tonawanda Site on page I-29 indicates the presence of BNAE compounds detected in samples including 2-methylnaphthalene, phenanthrene, fluoranthene, pyrene, benzo(a) anthracene, bis (s-ethylhexy) phthalate, chrysene, and benzo (a) pyrene and suggests that the area may have been used for disposal of oil refinery residues. Several oil refinery residues are "listed hazardous waste" under 40 CFR Part 261. The NRC evaluation in relation to hazardous waste determination is, therefore, not adequate. Until conclusive evidence is provided that the material does not contain hazardous constituents, the amendment should not be allowed.

Furthermore, the Ashland 2 proposal requires sampling (profiling) by the generator of the waste as well as verification sampling upon arrival at the Mill. Both of these activities are consistent with a commercial disposal operation, not a reprocessing operation. However, the Proposed Plan for the Ashland 1 and Ashland 2 Sites of November 1997 states that in addition to principal constituents of concern, i.e., radionuclides, copper, lead, and vanadium, there were "other constituents" identified and considered when performing the risk assessments. In order to evaluate these "other constituents"

and possibly shed additional light on the hazardous waste determination question, the State needs to review the entire Baseline Risk Assessment for the Tonawanda Site (DOE, 1995).

Finally, the State has found other errors in the TER. One example of NRC staff error in the review of the Ashland 2 license amendment is on page 2 of the TER, Transportation Requirements. The TER indicates that "[t]he containers will be loaded on flatbed railcars and transported cross-country to the final rail destination (expected to be either near Grand Junction, Colorado or Green River, Utah)." The State has learned, via correspondence from Allied Waste East Carbon Development Corporation to the Division of Radiation Control on July 10, 1998, that the actual off-loading of the containers will take place at East Carbon, Utah at the solid waste management facility. The TER indicates that the waste off-loading and transport will take place northeast of the facility and include travel on certain, previously evaluated roads. However, the actual off-loading is planned for an area southwest of the Mill, and the travel route includes roads not previously described or evaluated as part of the transportation scenario. As such, the TER is in error and brings into question the accuracy of other statements made in the TER.

F. Timeliness

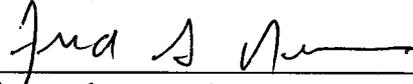
10 CFR § 2.1205(d)(2)(ii) allows a "person, other than an applicant, [to] file a request for hearing within . . . [t]hirty days after the requestor receives actual notice of an agency action granting an application in whole or in part." The State of Utah received actual notice of the NRC's amendment of IUSA's Source Material License No. SUA-1358 via facsimile transmission from IUSA on June 23, 1998. Accordingly, the State of Utah has submitted this petition in a timely fashion (i.e., within the thirty day limit). If this petition is rejected, the State requests the intervention petition be treated as a 2.206 petition.

IV. **Conclusion**

For the reasons set out above, the State of Utah requests a hearing on the NRC's amendment of IUSA's Source Material License No. SUA-1358.

DATED this 23rd day of July, 1998.

Respectfully submitted,

  
\_\_\_\_\_  
Fred G Nelson, Assistant Attorney General  
Attorney for State of Utah  
Utah Attorney General's Office  
160 East 300 South, 5th Floor, P.O. Box 140873  
Salt Lake City, UT 84114-0873  
Telephone: (801) 366-0286, Fax: (801) 366-0292

DOCKETED  
USNRC

CERTIFICATE OF SERVICE

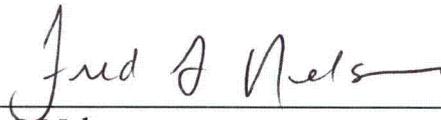
'98 JUL 27 P3:03

I hereby certify that copies of STATE OF UTAH'S REQUEST FOR HEARING AND PETITION FOR LEAVE TO INTERVENE and NOTICES OF APPEARANCE for Fred G Nelson and Denise Chancellor were served on the persons listed below by United States mail first class, this 23rd day of July, 1998:

Attn: Docketing & Service Branch  
Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
*(original and 2 copies)*

Earl E. Hoellen  
President and Chief Executive  
Officer  
International Uranium (USA)  
Corporation  
Independence Plaza, Suite 950  
1050 Seventeenth Street  
Denver, CO 80265

Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555-0001



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Fred G Nelson  
Assistant Attorney General  
State of Utah

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

'98 JUL 27 P5:36

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In the Matter of:	)	Docket No. 40-8681	OFFICE OF SECRETARY RULEMAKINGS AND ADJUDICATIONS STAFF
INTERNATIONAL URANIUM	)		
(USA) CORPORATION	)	July 23, 1998	
(Source Material License Amendment)	)		

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NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney enters an appearance in the above-captioned matter. Pursuant to Utah Code Ann. § 67-5-1(1) and (2), the Attorney General is the legal advisor to the State of Utah, petitioner. In accordance with 10 C.F.R. § 2.713(b), the following information is provided:

Name:	Fred G Nelson (Bar Number 2383)
Address:	Utah Attorney General's Office 160 East 300 South, 5th Floor P.O. Box 140873 Salt Lake City, Utah 84114-0873
Telephone:	(801) 366-0285
Facsimile:	(801) 366-0292
E-mail:	fnelson@state.ut.us
Admissions:	United States Supreme Court United States Court of Appeals for the 9th United States Court of Appeals for the 10th United States District Court for the District of Utah Utah State Courts
Name of Party:	State of Utah

DATED at Salt Lake City, Utah this 23<sup>rd</sup> July, 1998.

Respectfully submitted,  
JAN GRAHAM  
Attorney General

A handwritten signature in cursive script, appearing to read "Fred G. Nelson", written over a horizontal line.

Fred G Nelson  
Assistant Attorney General

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

DOCKETED  
USNRC

'98 JUL 27 P5:36

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In the Matter of:	)	Docket No. 40-8681
	)	
INTERNATIONAL URANIUM	)	
(USA) CORPORATION	)	July 23, 1998
(Source Material License Amendment)	)	

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OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney enters an appearance in the above-captioned matter. Pursuant to Utah Code Ann. § 67-5-1(1) and (2), the Attorney General is the legal advisor to the State of Utah, petitioner. In accordance with 10 C.F.R. § 2.713(b), the following information is provided:

Name:	Denise Chancellor (Bar Number 5452)
Address:	Utah Attorney General's Office 160 East 300 South, 5th Floor P.O. Box 140873 Salt Lake City, Utah 84114-0873
Telephone:	(801) 366-0286
Facsimile:	(801) 366-0292
E-mail:	dchancel@state.ut.us
Admissions:	United States Court of Appeals for the 10th Circuit United States District Court for the District of Utah Utah State Courts
Name of Party:	State of Utah

DATED at Salt Lake City, Utah this 23<sup>rd</sup> July, 1998.

Respectfully submitted,  
JAN GRAHAM  
Attorney General

A handwritten signature in cursive script, appearing to read "Denise Chancellor", written over a horizontal line.

Denise Chancellor  
Assistant Attorney General



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20540-0001

International Uranium (USA) Corporation  
ATTN: Ms. Michelle Rehmman,  
Environmental Manager  
Independence Plaza, Suite 950  
1050 Seventeenth Street  
Denver, Colorado 80265

SUBJECT: AMENDMENT 6 TO SOURCE MATERIAL LICENSE SUA-1358,  
INTERNATIONAL URANIUM (USA) CORPORATION'S WHITE MESA  
URANIUM MILL, BLANDING, UTAH

Dear Ms. Rehmman:

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its review of International Uranium (USA) Corporation's (IUSA's) request to amend NRC Source Material License SUA-1358, submitted by letter dated May 8, 1998. Additional information was provided by facsimile on May 27, 1998, and by letters dated May 29, June 3, and June 11, 1998. By these submittals, IUSA requested that SUA-1358 be amended to allow the receipt and processing of uranium-bearing material from the Ashland 2 Formerly Utilized Sites Remedial Action Program (FUSRAP) site, near Tonawanda, New York.

The details of the amendment request are discussed in the NRC staff's Technical Evaluation Report (TER) (Enclosure 1). In the TER, the staff documents the basis for its evaluation of IUSA's amendment request, which the staff has reviewed in accordance with 10 CFR Part 40, Appendix A, requirements and NRC staff guidance "Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores" (50 FR 49296; September 22, 1996). Based on its review, the NRC staff has found the proposed amendment to be acceptable.

Therefore, pursuant to Title 10 of the Code of Federal Regulations, Part 40, Source Material License SUA-1358 is hereby amended by adding License Condition No. 10.10. All other conditions of this license shall remain the same. The enclosed license is being reissued to incorporate the above modification (Enclosure 2). An environmental review was not performed since this licensing action is categorically excluded under 10 CFR 51.22(c)(11).

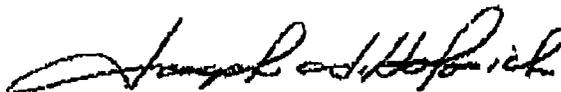
It is important to note that the material in question may be defined as 11e.(2) byproduct material as defined in the Atomic Energy Act of 1954. However, this material is not subject to NRC regulation until it is received by IUSA, an NRC licensee, for processing for its source-material content under IUSA's NRC license, because the material (uranium mill tailings) was produced by an activity not licensed by NRC after November 8, 1978.

M. Rehmann

- 2 -

If you have any questions regarding this letter or the enclosures, please contact Mr. James Park, the NRC Project Manager for the White Mesa mill, at (301) 415-6699.

Sincerely,



Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8691  
SUA-1358, Amendment No. 6

Enclosures: As stated (2)

cc: W. Sinclair, UT

TECHNICAL EVALUATION REPORT  
REQUEST TO RECEIVE AND PROCESS ASHLAND 2 FUSRAP MATERIAL

DOCKET NO. 40-8681

LICENSE NO. SUA-1358

LICENSEE: International Uranium (USA) Corporation

FACILITY: White Mesa Uranium Mill

PROJECT MANAGER: James Park

**SUMMARY AND CONCLUSIONS:**

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed International Uranium (USA) Corporation's (IUSA's) request dated May 8, 1998, to receive and process uranium-bearing material from the Formerly Utilized Sites Remedial Actions Program (FUSRAP) Ashland 2 site, in the Town of Tonawanda, New York. IUSA provided additional information by facsimile on May 27, 1998, and by letters dated May 29, June 3, and June 11, 1998.

The staff has reviewed IUSA's request against the September 1995 guidance pertaining to alternate feed materials and finds the amendment request to be acceptable.

**DESCRIPTION OF LICENSEE'S AMENDMENT REQUEST:**

By its submittal dated May 8, 1998, IUSA requested that NRC Source Material License SUA-1358 be amended to allow the receipt and processing of alternate feed material (i.e., material other than natural uranium ore) at its White Mesa uranium mill located near Blanding, Utah. The uranium-bearing material in question, weighing approximately 24,000 to 25,000 dry tons, is located at the Ashland 2 FUSRAP site, in the Town of Tonawanda, New York, which currently is under the management of the U.S. Army Corps of Engineers (USACE). IUSA provided additional information by facsimile on May 27, 1998, and by letters dated May 29, June 3, and June 11, 1998.

Site and Material Information

The material consists of uranium ore processing residues and contaminated soils associated with activities conducted by the Manhattan Engineering District (MED) during the mid-1940s. Approximately 8000 tons of waste products resulting from the processing of pitchblende (UO<sub>2</sub>) and domestic uranium ores at nearby facilities were disposed originally at a site known as the Haist property (now called Ashland 1). In 1960, the Ashland 1 property was transferred to the Ashland Oil Company.

In 1974, Ashland Oil constructed a banded area for two petroleum storage tanks and a drainage ditch on the Ashland 1 property. Approximately 4600 m<sup>3</sup> (6000 yd<sup>3</sup>) of soil containing MED-related residues and commingled inorganic constituents were removed from the site, with an indeterminate quantity of these soils transported to the Ashland 2 site for disposal. These residues and commingled inorganic constituents were placed in an area of the Ashland 2 property that adjoined an industrial landfill operated by Ashland Oil. This landfill, which was closed and capped with clay soil in 1982, accepted general refuse and chemical and industrial byproducts from 1957 to 1982.

During remedial investigation activities carried out by the U.S. Department of Energy (DOE) in the late 1980s and early 1990s, the primary "constituents of interest" identified at the Ashland 2 site were uranium, thorium-230, radium-226, and metals present in the ore filter cake (aluminum, calcium, copper, iron, lead, magnesium, manganese, phosphorous, and vanadium). Investigations further indicated that the MED-related radionuclides and associated metals generally were confined to an approximately 20,000 m<sup>2</sup> (4.9 acre) area between the two branches of Rattlesnake Creek (DOE, 1995a).

Currently, the Ashland 2 property, which is owned by the Ashland Petroleum Company, is vacant and largely overgrown with grass, bushes, and weeds. The property also contains marshy areas that are hydrologically connected to the Rattlesnake and Twomile Creeks and to the Niagara River (USACE, 1997).

#### Transportation Considerations

Following excavation of the material at the Ashland 2 site, it will be shipped by train and exclusive-use trucks from the Town of Tonawanda to the White Mesa mill in intermodal containers. After being loaded and sealed at the site, the containers will be transported by truck to a nearby intermodal rail terminal. The containers will be loaded on flatbed railcars and transported cross-country to the final rail destination (expected to be either near Grand Junction, Colorado; Cisco, Utah; or Green River, Utah), where they will be transferred to trucks for the final leg of the journey to the White Mesa mill. It is expected that approximately 60 trucks per week will be used to transport the material from the final rail destination to the mill.

Trucks used to transport the material to the mill site will be radiometrically scanned upon arrival to ensure that leakage has not occurred and that radiation levels are within appropriate limits. The trucks will be scanned again prior to their release from the mill site restricted area. In addition, the intermodal containers used to transport the material will be properly closed, cleaned (if necessary), surveyed, and documented before leaving the White Mesa site.

Although the material in question may meet the definition of 11e.(2) byproduct material under the Atomic Energy Act of 1954 (AEA), this material is not subject to NRC regulation until it is received by IUSA, an NRC licensee, for processing for its source-material content under the

NRC license, because the material was produced by an activity not licensed by NRC after November 8, 1978. Therefore, in addition, the material is not subject to NRC jurisdiction during transport.

#### Handling and Processing at the Mill Site

At the mill site, the Ashland 2 material will be emptied from the intermodal containers and stockpiled. It will be processed alone or commingled with conventional ores, and in the same fashion as that used to process such ores. No modifications to the mill circuit will be necessary to process this material.

The efficiency of airborne contamination control measures will be assessed while the material is in stockpile. Airborne particulate samples and breathing zone samples will be collected in those areas during initial material processing activities and analyzed for gross alpha. Sampling results will be used to establish health and safety guidelines to be implemented throughout the processing operations.

IUSA will provide appropriate personal protective equipment (coveralls, gloves, and respiratory protection (if needed)) to individuals engaged in handling the material. Additional environmental air samples will be collected at nearby locations to the material processing activities and analyzed to ensure that the established contamination control measures are adequate and effective.

#### TECHNICAL EVALUATION:

The NRC staff has reviewed IUSA's request in accordance with 10 CFR Part 40, Appendix A, requirements and NRC staff guidance "Final Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores" (60 FR 49296; September 22, 1995). This guidance (referred to hereinafter as the alternate feed guidance) requires that the staff make the following determinations in its reviews of licensee requests to process material other than natural uranium ores:

- (a) Whether the feed material meets the definition of "ore;"
- (b) Whether the feed material contains hazardous waste; and
- (c) Whether the ore is being processed primarily for its source-material content.

### Determination of whether the feed material is "ore"

For the tailings and wastes from the proposed processing to qualify as 11e.(2) byproduct material, the feed material must qualify as "ore." In the alternate feed guidance, ore is defined as

"... a natural or native matter that may be mined and treated for the extraction of any of its constituents or any other matter from which source material is extracted in a licensed uranium or thorium mill."

The proposed alternate feed material contains varying concentrations of uranium, ranging from non-detectable to greater than 1.0 percent by weight, depending on the sample location. IUSA believes that recoverable amounts of uranium are present, and that, on average, the uranium concentration for this material will be approximately 0.05 percent or greater by weight. IUSA is proposing to extract this uranium. Therefore, the material meets the definition of ore, because it is a "matter from which source material is extracted in a licensed uranium or thorium mill."

### Determination of whether the feed material contains hazardous waste

Under the alternate feed guidance, proposed feed material which contains a listed hazardous waste will not be approved by the NRC staff for processing at a licensed mill. Feed materials which exhibit only a characteristic of hazardous waste (i.e., ignitability, corrosivity, reactivity, or toxicity) would not be regulated as hazardous waste and could therefore be approved by the staff for recycling and extraction of source material. However, this does not apply to residues from water treatment. Therefore, NRC staff acceptance of such residues as feed material would depend on their not containing any hazardous or characteristic hazardous waste.

Remedial investigations carried by the DOE did not find listed hazardous wastes on the Ashland 2 property (DOE, 1996a). In addition, it is the USACE's belief, based on process knowledge and its own analyses, that the material contains no hazardous wastes (USACE, 1998). However, to guard against the potential for material containing such wastes being sent to White Mesa for processing, ICF Kaiser, the USACE contractor charged with excavating the material and preparing it for shipment offsite, will conduct confirmatory testing of excavated materials prior to their shipment to ensure that listed hazardous wastes are not present. Any material that testing indicates contains hazardous wastes will not be included in shipments to White Mesa. Finally, as committed to in its June 11, 1998, letter, IUSA will conduct testing of Ashland 2 material arriving at the site on a regular basis to confirm ICF Kaiser's determinations.

With respect to the possibility that industrial and chemical byproducts disposed at the former Ashland Oil industrial landfill have affected materials to be excavated at the Ashland 2 site, the staff considers that ICF Kaiser's sampling program and IUSA's confirmatory analyses will minimize the likelihood that any impacted materials, if they exist, will be transported to and processed at the White Mesa mill.

Therefore, the NRC staff finds that the Ashland 2 material to be processed at the White Mesa mill will not be hazardous waste or contain a listed hazardous waste. The staff has determined also that the Ashland 2 material is not a residue from water treatment. This material consists of wastes from the initial processing of uranium ores and associated contaminated soils.

Therefore, the NRC staff considers the uranium-bearing material acceptable for the extraction of source material.

#### **Determination of whether the feed material is being processed primarily for its source-material content**

To show that potential alternate feed material is being processed primarily for its source-material content, a licensee must either (1) demonstrate that the material would be approved for disposal in the tailings impoundment under the "Final Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments;" or (2) certify, under oath or affirmation, that the material is being processed primarily for the recovery of uranium and for no other primary purpose. Any such certification must be supported by an appropriate justification and accompanying documentation.

The licensee has provided a signed affirmation that the uranium-bearing material is being processed primarily for the recovery of uranium and for no other primary purpose. IUSA states that the uranium content of the material, in conjunction with the financial considerations discussed below, makes processing the Ashland 2 material economically attractive to IUSA.

It is IUSA's intent to process the Ashland 2 material either alone or commingled with conventionally-mined uranium ores during the same mill run. The licensee believes that this arrangement will result in several benefits which directly influence the cost of processing:

- The financial costs of stockpiling ore on the mill site will be reduced since ores will be processed through the mill at a higher rate;
- IUSA will be able to respond more quickly to changing market prices for uranium and vanadium by reducing the time between mining of the ore and producing and selling the product (i.e.,  $U_3O_8$  and  $V_2O_5$ );
- In processing the Ashland 2 material with the conventional ores, IUSA will be better able to smooth out the variability in conventional ore production and delivery to the mill, and thus run the mill for longer periods of time; and
- IUSA will be able to retain trained mill workers for longer periods of time, resulting in a more efficient workforce and a reduced fear of losing trained employees.

The combination of these benefits, IUSA believes, will reduce the costs of processing the Ashland 2 material, thus making the overall costs of running the mill economical to recover the relatively low concentrations of uranium and other recoverable elements in the material.

In addition, the DOE, which managed the FUSRAP sites prior to the USACE, determined previously that the Ashland 2 material meets the definition of 11e.(2) byproduct material under the AEA (DOE, 1985; 1996b). Therefore, the material could be disposed of directly in the White Mesa tailings impoundments. As such, the material meets the co-disposal test in the staff's guidance, and because it does, it can be concluded that IUSA will be processing the Ashland 2 material primarily for its source-material content.

It is important to note, however, that, although the material in question may meet the definition of 11e.(2) byproduct material under the AEA, this material is not subject to NRC regulation until it is received by IUSA, an NRC licensee, for processing for its source-material content under the NRC license, because the material was produced by an activity not licensed by NRC after November 8, 1978. Therefore, in addition, the material is not subject to NRC jurisdiction during transport.

#### Conclusions concerning alternate feed material designation

Based on the information provided by the licensee, the NRC staff finds that the Ashland 2 material is alternate feed material because: (1) it meets the definition of "ore," (2) the material to be processed at the White Mesa mill will not be or contain listed hazardous wastes, and (3) it is being processed primarily for its source-material content.

#### Other considerations

The NRC staff also has concluded that the processing of this material will not result in (1) a significant change or increase in the types or amounts of effluents that may be released offsite; (2) a significant increase in individual or cumulative occupational radiation exposure; (3) a significant construction impact; or (4) a significant increase in the potential for or consequences from radiological accidents. This conclusion is based on the following information:

- a. Yellowcake produced from the processing of this material will not cause the currently-approved yellowcake production limit of 4380 tons per year to be exceeded. In addition, and as a result, radiological doses to members of the public in the vicinity of the mill will not be elevated above levels previously assessed and approved.
- b. No modifications to the mill circuit design are necessary to process the Ashland 2 material.
- c. Tailings produced by the processing of this material will be disposed of on-site in an existing lined tailings impoundment (Cell 3). The addition of these tailings (a maximum

- of 25,000 tons) to Cell 3 will increase the total amount of tailings in the cell by one percent, to a total of approximately 70 percent of cell capacity; therefore, no new impoundments are necessary. The design of the existing impoundment, which includes a leak detection system, previously has been approved by NRC, and IUSA is required by its NRC license to conduct regular monitoring of the impoundment liners and of the groundwater around the impoundments to detect leakage if it should occur.
- d. In general, the Ashland 2 material is similar in composition to the mill tailings currently disposed of in the Cell 3 impoundment, because it contains metals and other parameters which are present already in the tailings. In addition, the amount of tailings (a maximum of 25,000 tons) produced by processing the Ashland 2 material is not significant in comparison to the total amount of tailings currently in the cell (approximately 1.35 million tons). Finally, as stated previously, IUSA is required to conduct regular monitoring of the impoundment leak detection systems and of the groundwater in the vicinity of the impoundments to detect leakage if it should occur. Therefore, the staff considers that any environmental impacts that could be associated with the disposal of the Ashland 2 tailings will be minimal.
- e. For the following reasons, it is not expected that transportation impacts associated with the movement of the Ashland 2 material by train and truck from the Town of Tonawanda, New York to the White Mesa mill will be significant:
- The material will be shipped as "low specific activity" material in exclusive-use containers (i.e., no other materials will be in the containers with the uranium-bearing material). The containers will be appropriately labeled, placarded, and manifested, and shipments will be tracked by the shipping company from the Ashland 2 site until they reach the White Mesa mill.
  - On average during 1996, 370 trucks per day traveled the stretch of State Road 181 between Monticello, UT and Blanding, UT (personal communication with the State of Utah Department of Transportation). IUSA anticipates an additional 60 trucks per week (or approximately 8.6 trucks per day) traveling this route to the mill, representing an increased traffic load of only two percent. Shipments are expected to take place over the course of a limited time period (three to four months).
  - The containers and trucks involved in transporting the material to the mill site will be surveyed and decontaminated, as necessary, prior to leaving the Ashland 2 site for White Mesa and again prior to leaving the mill site for the return trip.
- f. The potential for employee exposures from the handling and processing of this material is not expected to be any more significant than that normally encountered with the milling of conventional uranium ores. Mill employees involved in handling the material

will be provided with personal protective equipment (e.g., coveralls, rubber gloves), including respiratory protection, if necessary. Airborne particulate and breathing zone sampling results will be used to establish health and safety guidelines to be implemented throughout the processing operations.

#### REFERENCES:

U.S. Army Corps of Engineers (USACE), 1988, "Record of Decision for the Ashland 1 (including Seaway Area D) and Ashland 2 Sites, Tonawanda, New York," April 1988.

USACE, 1987, "Proposed Plan for the Ashland 1 and Ashland 2 Sites, Tonawanda, New York," USACE/OR/21950-1029, November 1987.

U.S. Department of Energy (DOE), 1996a, "1996 BEMR: Ashland 2," available on the Internet at <<http://eagle.emweb.lcx.net/bemr96/ash2.html>>.

DOE, 1988b, "Introduction to Formerly Utilized Sites REMEDIAL ACTION PROGRAM (FUSRAP)," available on the Internet at <<http://www.em.doe.gov/bemr96/fusrap.html>>.

DOE, 1995, "Formerly Utilized Sites Remedial Action Program (FUSRAP): Building Stakeholder Partnerships to Achieve Effective Cleanup," Office of Environmental Restoration, DOE/EM-0233, April 1995.

#### RECOMMENDED LICENSE CHANGE:

Pursuant to Title 10 of the Code of Federal Regulations, Part 40, Source Material License SUA-1358 will be amended by the addition of License Condition No. 10.10 as follows:

10.10 The licensee is authorized to receive and process source material from the Ashland 2 Formerly Utilized Sites Remedial Action Program (FUSRAP) site, located near Tonawanda, New York, in accordance with the amendment request dated May 8, 1998, as amended by the submittals dated May 27, June 3, and June 11, 1998.

[Applicable Amendment: 6]

#### ENVIRONMENTAL IMPACT EVALUATION:

An environmental report covering the information identified in 10 CFR 61.45 was not required from the licensee. The environmental impacts associated with the excavation of this material and associated site cleanup activities were addressed previously by the USACE and found to be not significant (USACE, 1998).

Because IUSA's receipt and processing of the material will not result in (1) a significant change or increase in the types or amounts of effluents that may be released offsite; (2) a significant increase in individual or cumulative occupational radiation exposure; (3) a significant construction impact; or (4) a significant increase in the potential for or consequences from radiological accidents, an environmental review was not performed since actions meeting these criteria are categorically excluded under 10 CFR 51.22(c)(11).